LOUISIANA

STATE OF THE STATE 1978

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LOUISIANA STATE OF THE STATE 1978

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an economic and social report to the governor

LOUISIANA STATE PLANNING OFFICE
OFFICE OF THE GOVERNOR
Donna Mayeux Irvin, Executive Director
Baton Rouge, Louisiana
July 1979

To Lawrence L. Lovell, editor of **State of the State** 1973-1977.

STATE OF LOUISIANA

STATE PLANNING OFFICE

OFFICE OF THE GOVERNOR

EDWIN EDWARDS
GOVERNOR

DONNA MAYEUX IRVIN
EXECUTIVE DIRECTOR

July 1, 1979

Honorable Edwin W. Edwards
Governor of Louisiana
State Capitol
Baton Rouge, Louisiana 70804

Dear Governor Edwards:

I am pleased to present Louisiana State of the State 1978. This report, mandated by R. S. 49:1054(8), provides data on current and projected economic and social conditions in Louisiana.

The 1978 State of the State constitutes a valuable source of information for private and public sector leaders, teachers, students, and interested citizens in Louisiana and throughout the nation.

I trust you will find the report both informative and useful.

Sincerely,

DONNA MAYEUX IRVIN
Executive Director

4528 BENNINGTON AVENUE · BATON ROUGE, LOUISIANA 70808 · 504/925-4585

EDWIN EDWARDS
GOVERNOR

State of Louisiana

EXECUTIVE DEPARTMENT

Baton Rouge

CITIZENS OF LOUISIANA

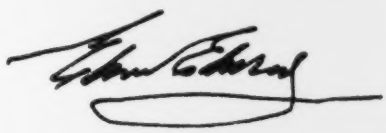
Louisiana State of the State 1978 marks the last publication of this annual report during my present term as governor. The 1978 State of the State provides a timely capsule analysis of many aspects of the state--socioeconomic indicators, the economy, transportation, natural resources, environmental quality, health, education, criminal justice, culture and state government finance.

Louisiana's rich culture and plentiful natural resources, as shown in the 1978 State of the State, provide citizens of the state with a distinctive heritage and a solid economic base. The blending of diverse ethnic backgrounds in Louisiana has produced a unique culture in which all Louisianians can find roots, a culture embracing a joie de vivre celebrated in myriad festivals throughout the state.

Louisiana's natural resources offer both aesthetic and economic benefits for Louisianians. The world energy crisis has focused national attention on Louisiana because of the state's abundant mineral resources--particularly natural gas and oil. Louisiana ranks first nationally in the production of natural gas and second in the production of oil. Our state provides more energy to the rest of the nation than any other state.

Louisiana citizens can take justifiable pride in the state's contributions to the nation. Louisiana's cultural heritage is a colorful thread in the fabric of America. Moreover, Louisiana's natural resources are an increasingly critical component of the nation's economic well-being.

Louisiana's future is bright. Certainly, our people can meet every challenge. Vive la Louisiane!



EDWIN EDWARDS
GOVERNOR

State of Louisiana

EXECUTIVE DEPARTMENT

Baton Rouge

Louisianais, Louisianais,

L'édition 1978 de Louisiana State of the State sera la dernière publication de ce rapport annuel durant mon actuel mandat de Gouverneur. Cet ouvrage fournit en condensé une analyse propice de nombreux aspects des indices socio-économiques de notre Etat, l'économie, les transports, les ressources naturelles, la qualité de l'environnement, la santé, l'enseignement, la justice pénale, la culture et les finances publiques.

La riche culture de la Louisiane et ses abondantes ressources naturelles, telles qu'elle figurent dans l'édition 1978 de State of the State, dotent les citoyens de notre Etat d'un héritage exceptionnel et d'une solide assise économique. La fusion des divers fonds ethniques qui composent la Louisiane a produit une culture unique où tous les Louisianais peuvent se sentir enracinés, une culture qui renferme cette joie de vivre célébrée à travers notre Etat lors d'innombrables festivals.

Les ressources naturelles de la Louisiane assurent des bénéfices à la fois économiques et esthétiques aux Louisianais. La crise mondiale de l'énergie a fait de la Louisiane le point de mire de la Nation, à cause des riches ressources minérales de notre Etat, le gaz naturel et le pétrole en particulier. La Louisiane se place au premier rang de la Nation pour la production de gaz naturel et au second pour la production de pétrole. Elle fournit au reste du Pays plus d'énergie que n'importe quel autre état.

Les citoyens de Louisiane peuvent s'enorgueillir à juste titre des contributions de leur Etat à la richesse nationale. l'héritage culturel de la Louisiane est un fil coloré dans la tissue de l'Amérique. Ses ressources naturelles ont, en outre, une part de plus en plus décisive dans la santé économique de la Nation.

L'avenir de la Louisiane s'annonce radieux. A coup sûr, notre peuple peut relever tous les défis. Vive la Louisiane!

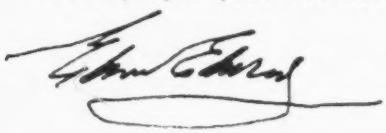


Table of Contents

PREFACE

1. SOCIOECONOMIC CHARACTERISTICS 1
   - Introduction 1
   - Population 1
   - Income 14
   - Employment 21
   - Conclusion 26

2. COMMERCE 27
   - Introduction 27
   - Industry 27
   - Business 35
   - Jobs and the Labor Force 44
   - Communications 49
   - Conclusion 56

3. TRANSPORTATION 57
   - Introduction 57
   - Highways 57
   - Railroads 59
   - Waterways and Ports 61
   - Aviation 63
   - Conclusion 69

4. NATURAL RESOURCES AND ENERGY 71
   - Introduction 71
   - Land Resources 71
   - Water Resources 83
   - Mineral and Energy Resources 89
   - Fish and Game Resources 114
   - Conclusion 120

5. ENVIRONMENTAL QUALITY 121
Introduction 121
Water Quality 121
Air Quality 125
Waste Disposal 129
Conclusion 131

6. HEALTH AND HUMAN SERVICES 133
Introduction 133
Health 133
Services to Special Groups 149
Conclusion 153

7. EDUCATION 155
Introduction 155
Educational Attainment Levels in Louisiana 155
Elementary and Secondary Education 157
Vocational Education 173
Higher Education 174
Conclusion 187

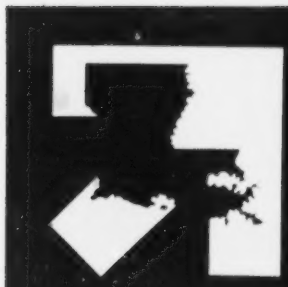
8. CRIMINAL JUSTICE 189
Introduction 189
Louisiana Crime Rates 189
Law Enforcement Activities 193
Louisiana Court System 196
Corrections 197
Cost of the Criminal Justice System 204
Conclusion 204

9. CULTURE, RECREATIONAL OPPORTUNITIES AND TOURISM 207
Introduction 207
Culture 207
Outdoor Recreation 214
Tourism 219
Interrelationship of Culture, Recreation and Tourism 224

10. GOVERNMENT 225
Introduction 225
Reorganization of the Executive Branch 225
Government Finance 226
Conclusion 241

APPENDIX 243

ACKNOWLEDGMENTS 247



Socioeconomic Characteristics

Chapter 1

The major socioeconomic factors affecting the Louisiana economy are population, income and employment. These rather standard gauges of economic vitality are highly interrelated: population growth exerts a positive influence on income and employment; conversely, employment opportunities and wage levels influence migration patterns.

POPULATION

Population growth is an important element in the economic development of a state. People constitute the ultimate source of aggregate demand for marketed goods and services. The combination of a growing population and the desire for a higher standard of living results in a long term increase in consumer demand. The economy's response to rising demand is increased production utilizing fundamental inputs such as land, labor, capital and entrepreneurship. A growing population provides directly for one input—labor. Thus, population contributes substantially to both facets of the demand and supply process that is characteristic of the United States economy.

Over the long term, Louisiana has enjoyed a healthy level of population growth. During the period from 1940 to 1978, for example, the state's population increased by 67.8 percent. Table 1-1 illustrates the percentage gain in population for the nation and Louisiana during the decadal periods since 1940. When compared to the nation, Louisiana's best periods of growth were during the 1950s and 1970s. The uneven rates of population growth in Louisiana may be explained

TABLE 1-1
PERCENT CHANGE IN POPULATION OF THE UNITED STATES AND LOUISIANA 1940-1950, 1950-1960, 1960-1970 and 1970-1978

Years	Percent Change United States	Percent Change Louisiana
1940-1950	14.5	13.5
1950-1960	18.4	21.4
1960-1970	13.3*	11.8
1970-1978†	7.5‡	8.9

SOURCE: Louisiana State Planning Office based on data from U.S. Department of Commerce, Bureau of the Census, **Historical Statistics of the United States.**

* Percent change for United States, 1960-1970, is for coterminous United States.
† 1970-1978 figures are estimated.
‡ Percent change for United States, 1970-1978, includes Hawaii and Alaska.

primarily by the migration of people into and out of the state. Table 1-2 portrays "net migration" (defined as the number of in-migrants minus the number of out-migrants) in Louisiana for the decadal periods since 1940.

TABLE 1-2
NET MIGRATION, LOUISIANA, 1940-1950 1950-1960, 1960-1970 and 1970-1978

Period	Number
1940-1950	−112,100
1950-1960	− 39,000
1960-1970	−130,000
1970-1978*	+ 19,000

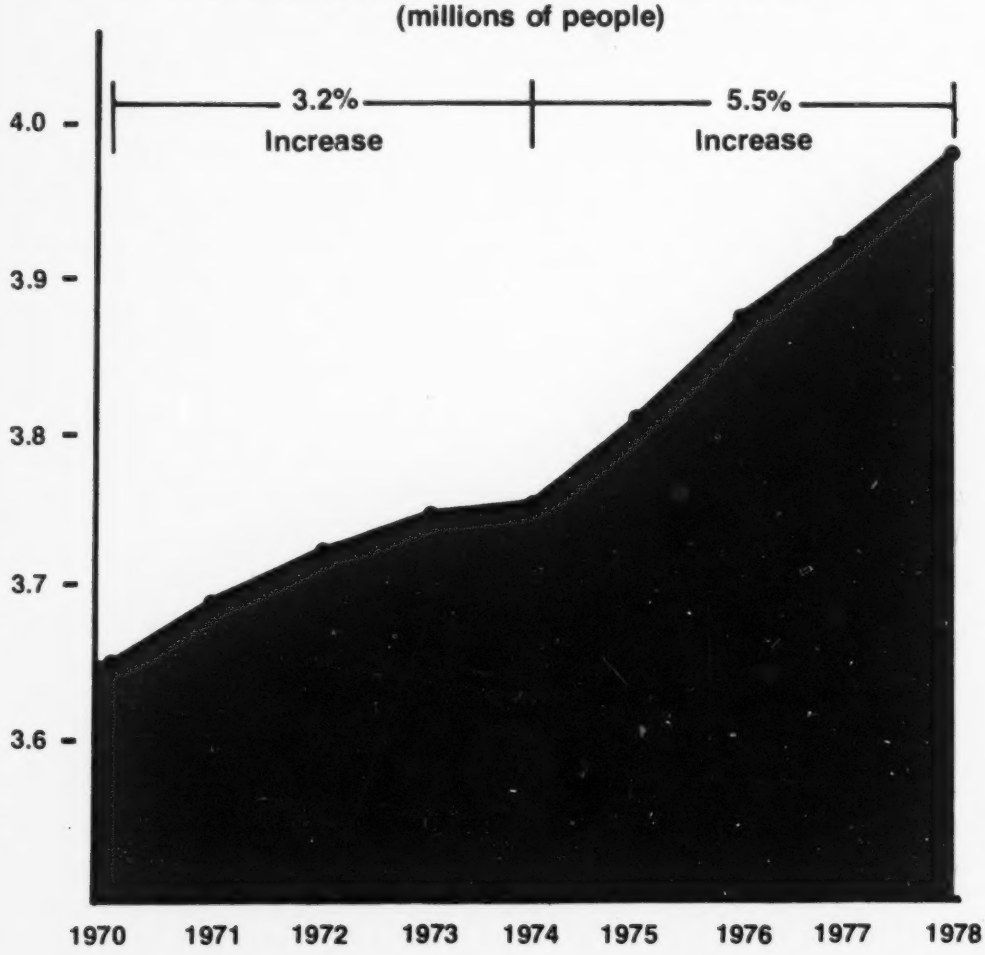
SOURCE: Louisiana State Planning Office based on data from U.S. Department of Commerce, Bureau of the Census, **Historical Statistics of the United States** and **Current Population Reports,** P-25, Nos. 727 and 757, July 1978; interview with Donald Starsinic, U.S. Bureau of the Census.

* Figure for 1970-1978 is estimated.

Louisiana has enjoyed its best periods of population growth when out-migration only slightly exceeded in-migration or when in-migration exceeded out-migration. Significantly, for the first time since 1940, Louisiana is in the enviable situation of having a positive net migration pattern. The effect of this new development and its timing are seen in Figure 1-1, which reveals a marked change in

FIGURE 1-1

LOUISIANA POPULATION GROWTH, 1970-1978
(millions of people)



SOURCE: Louisiana State Planning Office based on data from the U.S. Department of Commerce, Bureau of Census, **Current Population Reports,** P-25, Nos. 727 & 757, July, 1978.

population growth after 1974. Population growth in Louisiana from 1970 to 1974 totaled 118,000 persons, an increase of 3.2 percent; the corresponding figures for the period from 1974 to 1978 are 205,000 and 5.5 percent, respectively. At current rates of growth, the 1980 population will probably exceed the figures projected earlier in the decade.

Age Distribution

Although aggregate population increase is important, the composition of that growth, particularly age composition, is perhaps more significant. Table 1-3 shows the percentage distribution of the population by age group in the United States and Louisiana for 1970 and 1977.

TABLE 1-3
PERCENTAGE DISTRIBUTION OF THE POPULATION OF THE UNITED STATES AND LOUISIANA BY AGE GROUP, 1970 and 1977

	Percentage Distribution*			
	United States		Louisiana	
Age	1970	1977	1970	1977
Under 5	8.4	7.0	9.6	8.3
5 to 17	25.8	22.7	28.6	25.1
18 to 64	55.9	59.4	53.5	57.3
65 and Over	9.8	10.9	8.4	9.3

SOURCE: Louisiana State Planning Office based on data from U.S. Department of Commerce, Bureau of the Census, **Current Population Reports,** P-25, No. 734, November 1978.

* Columns will not total 100 percent due to rounding.

Louisiana continues to have a larger percentage of persons under 18 years of age than does the nation—a fact largely attributable to the higher birth rate in the state. In 1977, 33.4 percent of the Louisiana population was under 18 years of age; the figure for the United States was 29.7 percent. The proportion of the Louisiana population in the productive age group of 18 to 64 is smaller than that of the United States; nonetheless, the gap is narrowing slightly. In 1970, 55.9 percent of the total national population was in the 18 to 64

year age group, compared with 53.5 percent of the Louisiana population—a difference of 2.4 percent. By 1977 the national figure was 59.4 percent (an increase of 3.5 percent) and the Louisiana figure was 57.3 percent (an increase of 3.8 percent)—i.e., a difference of 2.1 percent.

In comparison with the national figure, Louisiana has a smaller percentage of persons in the 65 years and over age group. Moreover, that difference increased slightly during the period from 1970 to 1977. The proportion of persons 65 years and over in the nation increased from 9.8 percent in 1970 to 10.9 percent in 1977—an increase of 1.1 percent. The figures for 1970 and 1977 for Louisiana were 8.4 percent and 9.3 percent, respectively—an increase of just 0.9 percent.

Table 1-4 provides estimates of the resident population distributed by age as well as the percentage distributions by age for the United States, Louisiana and selected southern states. Only Georgia

TABLE 1-4
PROVISIONAL ESTIMATES OF THE RESIDENT POPULATION BY AGE FOR THE UNITED STATES, LOUISIANA AND SELECTED SOUTHERN STATES, JULY 1, 1977
(thousands)

Age	US	LA	AL	AR	GA	MS	TN
Under 5	15,236	326	281	165	399	211	308
5 to 17	49,008	986	866	485	1,199	604	963
18 to 44	84,818	1,529	1,420	785	2,070	883	1,698
45 to 64	43,777	717	725	424	925	426	865
65 and Over	23,494	363	398	285	456	266	465
14 and Over	168,870	2,943	2,838	1,661	3,843	1,777	3,356
18 and Over	152,089	2,609	2,543	1,494	3,450	1,575	3,028
21 and Over	139,320	2,367	2,327	1,378	3,143	1,432	2,785
Total Resident Population	**216,332**	**3,921**	**3,690**	**2,144**	**5,048**	**2,389**	**4,299**
PERCENTAGE OF TOTAL RESIDENT POPULATION							
Under 5	7.0	8.3	7.6	7.7	7.9	8.8	7.2
5 to 17	22.7	25.1	23.5	22.6	23.8	25.3	22.4
18 to 44	39.2	39.0	38.5	36.6	41.0	37.0	39.5
45 to 64	20.2	18.3	19.6	19.8	18.3	17.8	20.1
65 and Over	10.9	9.3	10.8	13.3	9.0	11.1	10.8
14 and Over	78.1	75.1	76.9	77.5	76.1	74.4	78.1
18 and Over	70.3	66.5	68.9	69.7	68.3	65.9	70.4
21 and Over	64.4	60.4	63.1	64.3	62.3	59.9	64.8

SOURCE: Louisiana State Planning Office based on data from U.S. Department of Commerce, Bureau of the Census, **Current Population Reports,** P-25, No. 734, November 1978.

and Tennessee exceed Louisiana in total resident population. While the proportion of persons 5 to 17 years of age in Mississippi is greater than in Louisiana, Georgia, alone, has a larger school-age population. In terms of the proportion of the population that comprises the vast majority of the work force—i.e., persons 18 to 64 years of age—Louisiana ranks quite low: only Mississippi and Arkansas have a smaller proportion. Nonetheless, in total numbers of persons 18 to 64 years of age only Georgia and Tennessee exceed Louisiana.

In addition to comparing the distribution of Louisiana's resident population by age with other areas, it is important to analyze the distribution of that population by age over time (Table 1-5). Between 1970 and 1977 the aggregate number of persons 5 to 17 years of age declined—both in absolute and relative terms. This decline is serving to ease the quantitative burden of public education and allow the state to pursue more diligently qualitative educational improvements in spite of limited financial resources. In contrast, an increase of approximately 20 percent in the population aged 65 years and over during the period from 1970 to 1977 is a noteworthy development

TABLE 1-5
LOUISIANA RESIDENT POPULATION BY AGE
1970 and 1977
(thousands)

Age	1970	1977	Absolute Change 1970-1977	Percent Distribution 1970	Percent Distribution 1977
Under 5	349	326	- 23	9.6	8.3
5 to 17	1,041	986	- 55	28.6	25.1
18 to 44	1,271	1,529	258	34.9	39.0
45 to 64	677	717	40	18.6	18.3
65 and Over	305	363	58	8.4	9.3
14 and Over	2,567	2,943	376	70.5	75.1
18 and Over	2,254	2,609	355	61.9	66.5
21 and Over	2,040	2,367	327	56.0	60.4
Total Population	**3,643**	**3,921**	**278**	—	—

SOURCE: Louisiana State Planning Office based on data from U.S. Department of Commerce, Bureau of the Census, **Current Population Reports,** P-25, No. 734, November 1978.

because of state services required for that group. Persons 65 years and over comprised 9.3 percent of the Louisiana population in 1977 compared to a figure of 8.4 percent in 1970. Programs for the elderly will unquestionably become more costly as the potential client pool enlarges. The most positive aspect of the changing patterns in the age distribution of the Louisiana population is the 3.8 percent increase in the proportion of persons 18 to 64 years of age, since the labor force is drawn largely from this group. Significantly, within the 18 to 64 year age category, the 4.1 percent increase for the younger subgroup—persons 18 to 44 years of age—exceeds the percentage increase for the group as a whole; that is, the percentage of persons 45 to 64 years of age decreased by 0.3 percent. The marked increase within the younger segment, influenced substantially by Louisiana's changing migration patterns, assures the state of a higher ratio of labor-to-population. Concomitant benefits should include increased goods and services and higher total personal income for the state.

Regional Distribution

The regional distribution of the improved growth in Louisiana's population during the period 1974 to 1978 when compared with the years 1970 to 1974 has been relatively even. Approximately 80 percent of the southern parishes improved their rates of growth, while 70 percent of the northern parishes exhibited increased growth rates. Table 1-6 shows population data for Louisiana parishes and planning districts for 1970, 1974 and 1978. (Figure 1-2 depicts the location of the eight planning districts in Louisiana.) All planning districts sustained higher rates of growth in population in the years 1974 through 1978.

Figure 1-3 illustrates vividly this apparent new population growth vitality by identifying those parishes that declined in population from 1970 to 1974 but increased in population from 1974 to 1978. The river parishes, particularly those in northeast Louisiana that have traditionally experienced population losses, have in general reversed that tendency. Even among the four parishes in Louisiana still experiencing a decline in population, the rate of decline has been sharply reduced.

Table 1-7 provides population data for the Standard Metropolitan Statistical Areas (SMSA) in Louisiana for 1970, 1974 and 1978. The growth rates of the seven SMSAs for the period 1974 to 1978 ranged from 2.9 percent (Shreveport) to 9.8 percent (Lafayette). In the years 1974 through 1978, four of the seven SMSAs improved their growth

TABLE 1-6
POPULATIONS OF LOUISIANA PLANNING DISTRICTS AND PARISHES, 1970, 1974 and 1978

District and Parish	1970 Census (April 1)	1974 Revised Estimate	1978 Preliminary Estimate	Percent Change 1970-1974	Percent Change 1974-1978
DISTRICT 1					
Jefferson	338,229	388,658	427,019	14.9	9.9
Orleans	593,471	569,048	559,184	- 4.1	- 1.7
Plaquemines	25,225	25,945	26,696	2.9	2.9
St. Bernard	51,185	57,549	62,261	12.4	8.2
St. Tammany	63,585	73,435	92,585	15.5	26.1
TOTAL DISTRICT 1	**1,071,695**	**1,114,635**	**1,167,745**	**4.0**	**4.8**
DISTRICT 2					
Ascension	37,086	39,821	44,363	7.4	11.4
East Baton Rouge	285,167	307,865	332,262	8.0	7.9
East Feliciana	17,657	17,075	16,522	- 3.3	- 3.2
Iberville	30,746	30,096	30,788	- 2.1	2.3
Livingston	36,511	41,012	49,931	12.3	21.7
Pointe Coupee	22,002	21,667	22,646	- 1.5	4.5
St. Helena	9,937	9,432	9,893	- 5.1	4.9
Tangipahoa	65,875	69,064	76,350	4.8	10.5
Washington	41,987	42,319	43,127	0.8	1.9
West Baton Rouge	16,864	17,659	18,090	4.7	2.4
West Feliciana (Angola)	10,761	9,317	9,865	-13.4	5.9
TOTAL DISTRICT 2	**574,593**	**605,327**	**653,837**	**5.3**	**8.0**
DISTRICT 3					
Assumption	19,654	20,214	20,795	2.8	2.9
Lafourche	68,941	71,893	76,903	4.3	7.0
St. Charles	29,550	31,790	34,715	7.6	9.2
St. James	19,733	19,491	19,940	- 1.2	2.3
St. John	23,813	24,628	28,602	3.4	16.1
Terrebonne	76,049	81,145	89,438	6.7	10.2
TOTAL DISTRICT 3	**237,740**	**249,161**	**270,393**	**4.8**	**8.5**
DISTRICT 4					
Acadia	52,109	52,706	54,330	1.1	3.1
Evangeline	31,932	32,328	33,320	1.2	3.1
Iberia	57,397	59,546	64,636	3.7	8.5
Lafayette	111,643	122,619	134,166	9.8	9.4
St. Landry	80,364	78,959	83,178	- 1.7	5.3
St. Martin	32,453	34,063	35,987	5.0	5.6
St. Mary	60,752	60,140	61,699	- 1.0	2.6
Vermilion	43,071	44,208	46,972	2.6	6.3
TOTAL DISTRICT 4	**469,721**	**484,569**	**514,288**	**3.2**	**6.1**
DISTRICT 5					
Allen	20,794	20,357	20,729	- 2.1	1.8
Beauregard	22,888	24,761	27,628	8.2	11.6
Calcasieu	145,415	150,008	157,730	3.2	5.1
Cameron	8,194	9,077	9,528	10.8	5.0
Jefferson Davis	29,554	30,101	31,535	1.9	4.8
TOTAL DISTRICT 5	**226,845**	**234,304**	**247,150**	**3.3**	**5.5**

TABLE 1-6—*Continued*

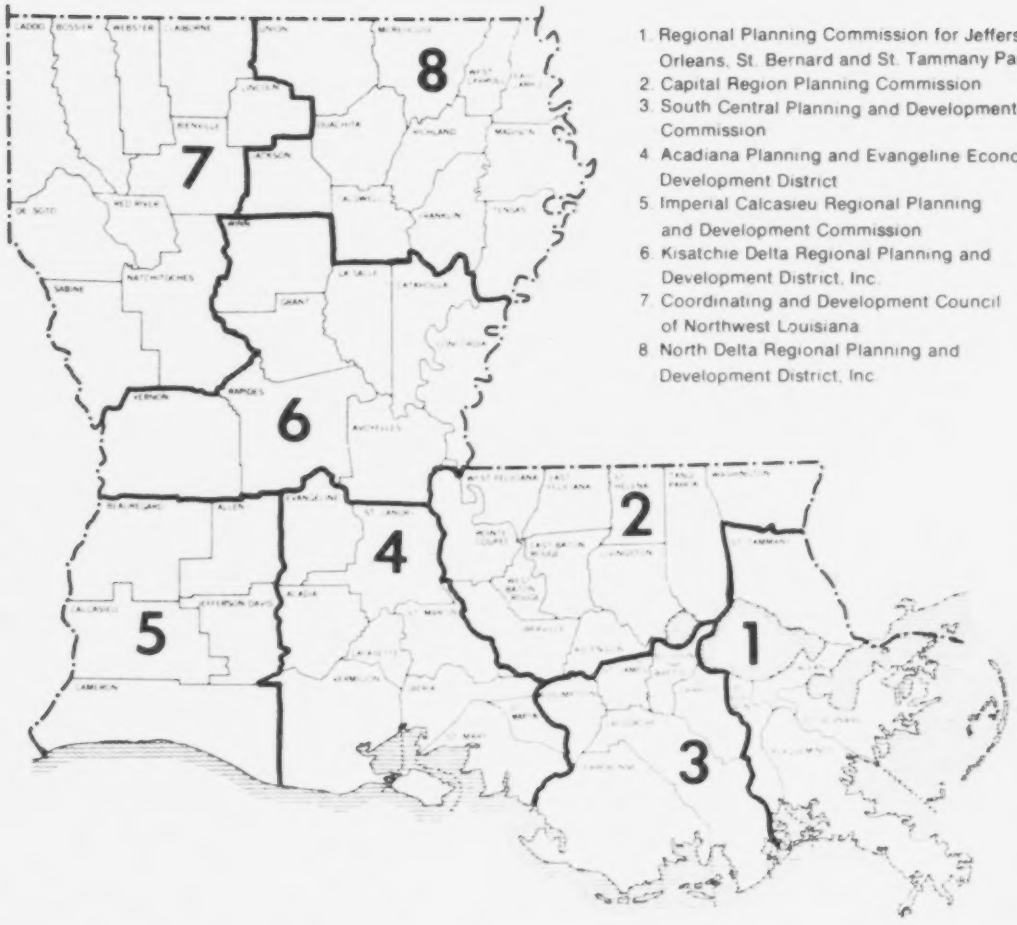
District and Parish	1970 Census (April 1)	1974 Revised Estimate	1978 Preliminary Estimate	Percent Change 1970-1974	Percent Change 1974-1978
DISTRICT 6					
Avoyelles	37,751	37,935	39,209	0.5	3.4
Catahoula	11,769	11,151	11,726	- 5.3	5.2
Concordia	22,578	21,497	22,237	- 4.8	3.4
Grant	13,671	13,987	15,151	2.3	8.3
LaSalle	13,295	14,397	15,242	8.3	5.9
Rapides	118,078	122,189	124,917	3.5	2.2
Vernon (Fort Polk)	53,794	44,697	45,901	-17.0	2.7
Winn	16,369	16,162	17,230	- 1.3	6.6
TOTAL DISTRICT 6	**287,305**	**282,015**	**291,613**	**- 1.8**	**3.4**
DISTRICT 7					
Bienville	16,024	16,190	17,226	1.0	6.4
Bossier	65,877	66,793	71,716	1.4	7.4
Caddo	230,184	236,782	242,406	2.9	2.4
Claiborne	17,024	16,037	16,682	- 5.8	4.0
DeSoto	22,764	22,441	23,704	- 1.4	5.6
Lincoln	33,800	36,257	37,198	7.3	2.6
Natchitoches	35,219	36,021	36,171	2.3	0.4
Red River	9,226	9,325	9,250	1.1	0.8
Sabine	18,638	19,455	20,090	4.4	3.3
Webster	39,939	39,988	42,068	0.1	5.2
TOTAL DISTRICT 7	**488,695**	**499,289**	**516,511**	**2.2**	**3.4**
DISTRICT 8					
Caldwell	9,354	10,058	10,247	7.5	1.9
East Carroll	12,884	12,054	11,654	- 6.4	- 3.3
Franklin	23,946	23,246	23,971	- 2.9	3.1
Jackson	15,963	16,220	16,895	1.6	4.2
Madison	15,065	14,299	14,646	- 5.0	2.4
Morehouse	34,463	32,173	33,692	- 0.9	1.6
Ouachita	115,387	122,891	130,703	6.5	6.4
Richland	21,774	21,512	21,524	- 1.2	0.0
Tensas	9,732	8,665	8,375	-11.0	- 3.3
Union	18,447	19,138	20,089	3.7	5.0
West Carroll	13,028	12,753	12,835	- 2.1	0.6
TOTAL DISTRICT 8	**288,043**	**293,009**	**304,631**	**1.7**	**4.0**
STATE TOTAL	**3,644,637***	**3,762,309**	**3,966,168**	**3.2**	**5.4**

SOURCE: Louisiana State Planning Office based on data from Louisiana Tech University, Research Division, **The Louisiana Economy.**

* Total does not agree with the official state total for April 1, 1970, as originally published due to subsequent corrections for Bossier, Lafayette and West Feliciana parishes made by the U.S. Bureau of the Census.

FIGURE 1-2

STATE PLANNING DISTRICTS



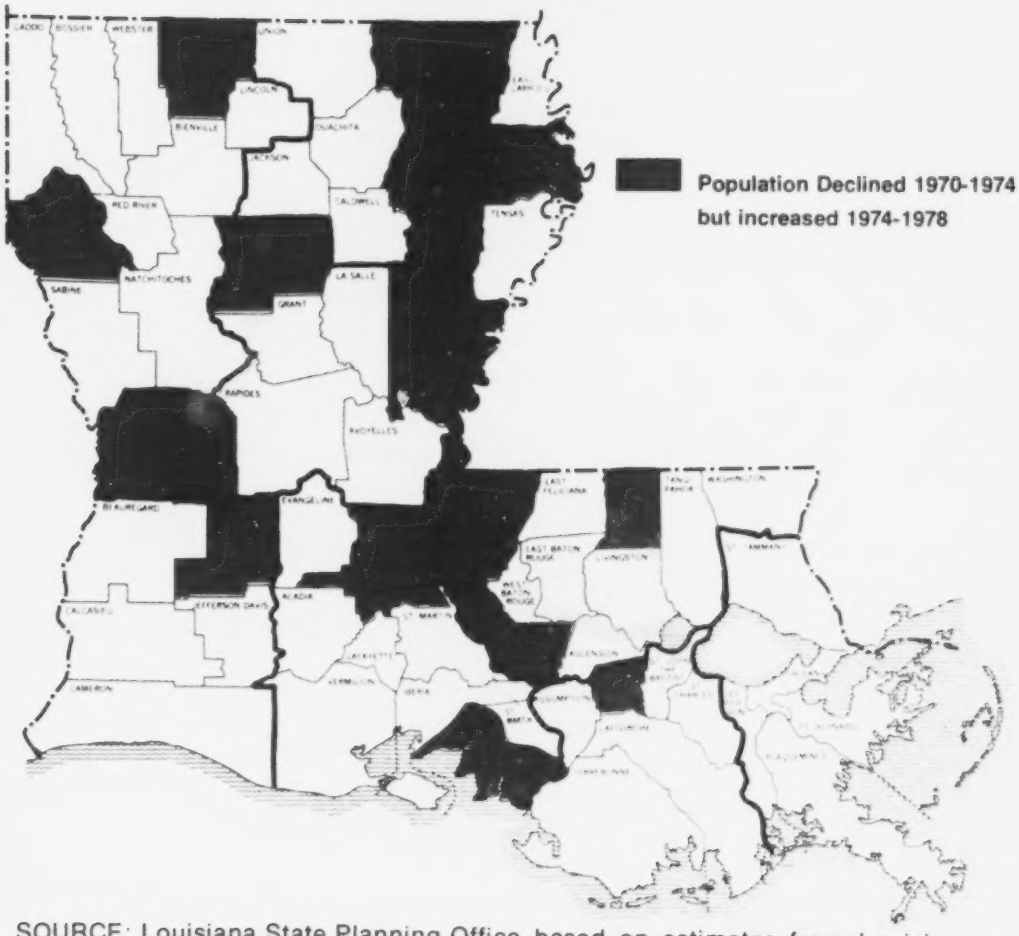
1. Regional Planning Commission for Jefferson, Orleans, St. Bernard and St. Tammany Parishes
2. Capital Region Planning Commission
3. South Central Planning and Development Commission
4. Acadiana Planning and Evangeline Economic Development District
5. Imperial Calcasieu Regional Planning and Development Commission
6. Kisatchie Delta Regional Planning and Development District, Inc.
7. Coordinating and Development Council of Northwest Louisiana
8. North Delta Regional Planning and Development District, Inc.

SOURCE: Louisiana State Planning Office.

rates over the 1970 to 1974 period (New Orleans, Baton Rouge, Lake Charles and Shreveport). Clearly, the strongest growing metropolitan markets are Baton Rouge and Lafayette, with Baton Rouge nearing Lafayette's growth rate during the last four years. In terms of growth in absolute numbers of people, New Orleans continues to lead the state with an additional 50,000-plus people during the last four years.

FIGURE 1-3

POPULATION DECLINE AND INCREASE FOR SELECTED PARISHES



SOURCE: Louisiana State Planning Office based on estimates from Louisiana Tech University, Division of Business and Economic Research, Cooperative Agency for Small Area Population Estimates.

TABLE 1-7
POPULATION OF LOUISIANA STANDARD METROPOLITAN STATISTICAL AREAS
1970, 1974 and 1978

SMSA	1970 Census (April 1)	1974 Revised Estimate	1978 Preliminary Estimate	Change 1970-1974		Change 1974-1978	
				Absolute	Percent	Absolute	Percent
New Orleans	1,046,470	1,088,690	1,141,049	42,220	4.0	52,359	4.8
Baton Rouge	375,628	406,357	444,646	30,729	8.2	38,289	9.4
Lafayette	111,643	122,619	134,166	10,976	9.8	11,547	9.4
Lake Charles	145,415	150,008	157,730	4,593	3.2	7,722	5.1
Alexandria	131,749	136,176	140,068	4,427	3.4	3,892	2.9
Shreveport	333,826	343,563	356,190	9,737	2.9	12,627	3.7
Monroe	115,387	122,891	130,703	7,504	6.5	7,812	6.4

SOURCE: Louisiana State Planning Office based on data from Louisiana Tech University, Research Division, **The Louisiana Economy.**

Selected Population Parameters

In 1976 the Bureau of the Census conducted a special study, the **Survey of Income and Education**, with a sample size large enough to produce some state-specific estimates of population parameters. Table 1-8 provides several findings of the survey. Between 1970 and 1976 the population in Louisiana became less concentrated in metropolitan areas. During the same period the percentage of black population decreased from 29.9 percent to 28.6 percent, apparently as a result of white in-migration rather than black out-migration—a phenomenon that occurred during the 1960s. The decline in family size from 3.8 to 3.6 persons is not surprising considering the declining birth rate nationally and the rather widespread desire for smaller, later families. Perhaps the most disturbing change has been the increase in the number of families with a female head—from 13.4 percent in 1970 to 15.4 percent in 1975. This development poses serious social and welfare questions and indicates the need for service-level planning by appropriate state agencies.

TABLE 1-8
SELECTED CHARACTERISTICS OF THE LOUISIANA POPULATION, 1970 and 1975

Characteristic	1970	1975
Racial Composition		
Percent White	70.10	71.40
Percent Black	29.90	28.60
Family Composition		
Percent with Female Head, No Husband Present	13.40	15.40
Family Mean Size		
Number of Persons	3.82	3.63
Residence Location		
Percent Metropolitan	58.80	57.80
Percent Nonmetropolitan	41.20	42.30

SOURCE: Louisiana State Planning Office based on data from U.S. Department of Commerce, Bureau of the Census, **Current Population Reports**, P-60, No. 112, June 1978.

INCOME

Because of the diversity of economic indicators in the National Income Accounts, economic growth at the national level may be measured in many ways. However, only one element of the National Income Accounts—personal income—is estimated for subregions of the United States. Consequently, the most widely used measure of economic welfare and growth for United States regions is personal income. Moreover, because personal income is estimated with a uniform methodology, interregional comparisons can be developed to provide a basis for determining a region's relative status.

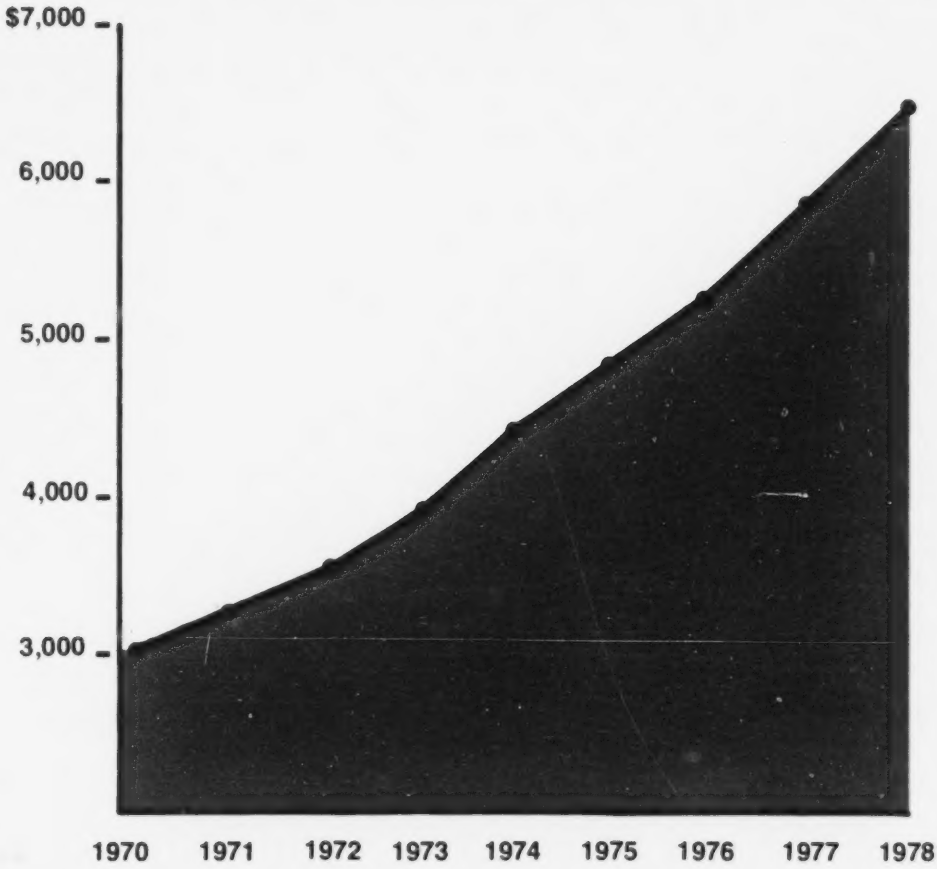
Figure 1-4 illustrates the growth of "per capita personal income" (defined as total personal income divided by total population) in Louisiana for the years 1970 through 1978. As with population, growth in per capita income was greater in the period from 1974 to 1978 (48.1 percent) than in the 1970 to 1974 period (41.6 percent). Although many factors traditionally influence personal income growth, the accelerated growth of both personal income and population in the last half of this decade is a good indicator of the fundamental strength of the Louisiana economy.

As a part of the Sun Belt, Louisiana enjoys region-specific attributes conducive to economic growth—e.g., good climate and exceptional access to energy. Nonetheless, the Public Affairs Research Council of Louisiana, Inc., in the report, **Accelerating Louisiana's Economic Growth** (July 1977), indicated that the state's per capita income relative to that of the nation did not change significantly between 1950 and 1975. Louisiana's per capita income as a percentage of national per capita income in 1950 was 75 percent and had risen only to 82 percent by 1975—an increase of just 7 percentage points in twenty-five years. More recent figures indicate that the state's slow growth rates in per capita income may be changing. Between 1973 and 1977, the relative level of the state's per capita income rose from 78 percent to 84 percent—a six percent increase and one nearly equivalent to the 7 percent growth recorded during the 1950 to 1975 period. This achievement is a result of the buoyant growth recorded by the Louisiana economy since 1974.

Table 1-9 illustrates Louisiana's record in income growth relative to the nation, the Southeast and contiguous states for the period 1974 through 1977. Since 1974 Louisiana has experienced a larger relative increase in per capita income than have the selected states. (The change in Louisiana's per capita income growth patterns that

FIGURE 1-4

PER CAPITA PERSONAL INCOME IN LOUISIANA, 1970-1978



SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economics Information System.

***1978 figure is estimated.**

seems apparent beginning in 1974 may well be associated with the fluctuations in national energy resources initiated by the 1973 Arab oil embargo. Quite likely this is the case, since mining and construction seem to be the most strongly growing categories—in terms of income—in the private nonfarm sector of the Louisiana economy.)

Per capita income and state ranking by parish for the years 1969, 1976 and 1977 are shown in Table 1-10. The range of per capita dollar

TABLE 1-9
PER CAPITA INCOME FOR THE UNITED STATES, THE SOUTHEAST, LOUISIANA, ARKANSAS, MISSISSIPPI AND TEXAS, 1974 and 1977

Area	1974	1977	Percent Change 1974-1977
U.S.	$5,428	$7,019	29.3
Southeast	4,689	6,055	29.1
Louisiana	4,373	5,913	35.2
Arkansas	4,271	5,622	31.6
Mississippi	3,781	5,030	33.0
Texas	5,048	6,803	34.8

SOURCE: Louisiana State Planning Office based on data compiled by Dr. Fred M. Wrighton, Economic Analyst.

increase within the parishes for 1969 through 1977 was $1,740 (Franklin) to $4,106 (Lafayette). Percentage increases in per capita income between 1969 and 1977 varied from 65.5 percent (Vernon) to 156.3 percent (Assumption). Forty-nine of sixty-four parishes showed greater than 100 percent increases in per capita income. In order of ranking, the parishes with the highest per capita income are East Baton Rouge, Jefferson, Orleans, Lafayette and Caddo.

Although the level of per capita income is much higher in metropolitan than in nonmetropolitan parishes, growth in per capita income has not been concentrated in urban areas. Nonetheless, while the growth rate for the sum of the nonmetropolitan parishes (120.3 percent) for the period 1969 to 1977 is higher than for the sum of the metropolitan parishes (102 percent), note that the absolute dollar difference between the two areas continues to widen.

Income growth in Louisiana has not been concentrated at the top of the income distribution; lower income families are also benefiting from income growth. The proportion of Louisiana families in poverty declined from 21.5 percent in 1970 to 15 percent in 1975 (Table 1-11). Black families in Louisiana also participated in income growth: family poverty among blacks dropped from 47.4 percent in 1970 to 37.3 percent in 1975.

Median family income in Louisiana rose dramatically, from $7,530 in 1970 to $12,576 in 1975—an increase of 67 percent (Table 1-12). Median income for black families rose from $4,004 in 1970 to

TABLE 1-10
LOUISIANA PER CAPITA INCOME BY PARISH
1969, 1976 and 1977

Parish	Per Capita Personal Income 1969	1976	1977	Parish Rank 1977	Percent Change 1969-1977
Acadia	$2,088	$4,181	$4,792	32	129.5
Allen	2,090	3,560	4,002	52	91.5
Ascension	2,328	4,991	5,444	17	133.8
Assumption	2,039	4,795	5,226	24	156.3
Avoyelles	1,831	3,298	3,579	60	95.5
Beauregard	2,222	3,974	4,332	44	95.0
Bienville	1,983	3,666	4,059	50	104.7
Bossier	2,629	5,005	5,478	16	108.4
Caddo	3,205	5,999	6,680	5	108.4
Calcasieu	2,973	5,568	6,223	9	109.3
Caldwell	1,636	3,567	3,837	56	134.5
Cameron	2,624	4,786	5,345	21	103.7
Catahoula	1,627	3,591	3,775	57	132.0
Claiborne	2,291	4,358	4,909	31	114.3
Concordia	2,359	4,945	5,208	25	120.8
DeSoto	2,152	4,092	4,622	37	114.8
East Baton Rouge	3,450	6,503	7,133	1	106.8
East Carroll	1,805	3,205	3,602	59	99.6
East Feliciana	1,831	3,770	4,256	45	132.4
Evangeline	1,799	3,429	3,891	54	116.3
Franklin	1,678	3,040	3,418	64	103.7
Grant	1,838	3,475	3,945	53	114.6
Iberia	2,422	5,190	5,850	13	141.5
Iberville	2,364	4,734	5,328	22	125.4
Jackson	2,363	4,331	4,706	35	99.2
Jefferson	3,629	6,375	6,960	2	91.8
Jefferson Davis	2,218	3,979	4,657	36	110.0
Lafayette	2,788	6,017	6,894	4	147.3
Lafourche	2,507	5,161	5,683	14	126.7
LaSalle	1,867	4,057	4,588	38	145.7
Lincoln	2,350	4,432	4,994	30	112.5
Livingston	2,399	4,748	5,037	29	110.0
Madison	1,844	3,449	3,727	58	102.1
Morehouse	2,138	4,337	4,735	34	121.5
Natchitoches	2,009	3,690	4,043	51	101.2
Orleans	3,513	6,299	6,919	3	97.0
Ouachita	2,739	4,951	5,506	15	101.0
Plaquemines	2,612	5,609	5,969	12	128.5
Pointe Coupee	1,925	3,887	4,483	41	132.9
Rapides	2,657	4,870	5,299	23	99.4
Red River	2,148	3,911	4,246	46	97.7
Richland	1,967	4,076	4,431	43	125.3

TABLE 1-10—*Continued*

Parish	Per Capita Personal Income 1969	1976	1977	Parish Rank 1977	Percent Change 1969-1977
Sabine	1,817	3,524	4,088	49	125.0
St. Bernard	3,418	5,931	6,565	6	92.1
St. Charles	2,724	5,377	6,080	11	123.2
St. Helena	1,508	3,269	3,550	61	135.4
St. James	2,533	5,508	6,137	10	142.3
St. John	2,190	4,955	5,356	20	144.6
St. Landry	1,893	3,679	4,113	48	117.3
St. Martin	1,695	3,821	4,201	47	147.8
St. Mary	2,660	5,520	6,246	8	134.8
St. Tammany	2,740	4,990	5,429	18	98.1
Tangipahoa	2,110	4,080	4,546	39	115.5
Tensas	1,835	4,366	4,541	40	147.5
Terrebonne	2,647	5,745	6,474	7	144.6
Union	2,032	4,183	4,458	42	119.4
Vermilion	2,246	4,448	5,128	27	128.3
Vernon	3,271	4,979	5,413	19	65.5
Washington	2,440	4,354	4,766	33	95.3
Webster	3,001	4,676	5,170	26	72.3
West Baton Rouge	2,177	4,560	5,049	28	131.9
West Carroll	1,701	3,211	3,507	63	106.2
West Feliciana	1,565	3,484	3,546	62	126.6
Winn	1,961	3,498	3,882	55	98.0
Sum of SMSA Parishes	3,221	5,906	6,506		120.3
Sum of nonSMSA Parishes	2,217	4,386	4,883		102.0
Louisiana	**2,839**	**5,347**	**5,910**		**108.2**

SOURCE: Louisiana State Planning Office based on data from U.S. Department of Commerce, Bureau of Economic Analysis, **Survey of Current Business,** April 1979.

$6,823 in 1975. Although these figures are encouraging, family income for blacks remains only 64 percent of family income for whites.

Table 1-13 illustrates labor and proprietors' income by source for the years 1975 and 1977 in Louisiana. All sources, with the exception of the federal military government sector, experienced an increase in income. The private sector shows a growth rate twice that of the government sector. In fact, state and local government provided only

TABLE 1-11
PERCENTAGE OF LOUISIANA FAMILIES LIVING IN POVERTY BY RACE, 1970 and 1975

	Percent 1970	Percent 1975
Total	21.5	15.0
White	12.6	7.8
Black	47.4	37.3

SOURCE: Louisiana State Planning Office based on data compiled by Dr. Fred M. Wrighton, Economic Analyst.

TABLE 1-12
MEDIAN INCOME OF LOUISIANA FAMILIES BY RACE, 1970 and 1975

	1970	1975	Percent Change
Total	$7,530	$12,576	67.0
White	8,820	14,825	68.1
Black	4,004	6,823	70.4

SOURCE: Louisiana State Planning Office based on data compiled by Dr. Fred M. Wrighton, Economic Analyst.

10.7 percent of the total Louisiana income in 1977, a fact which is heartening to fiscal conservatives. In the private nonfarm division, five of nine industries had growth rates exceeding the percentage increase for total Louisiana income. Particularly impressive were the mining and construction industries, with growth rates of 49.5 percent and 43.8 percent, respectively.

TABLE 1-13
LOUISIANA LABOR AND PROPRIETORS' INCOME BY SOURCE, 1975 and 1977

Source	1975 Millions of Dollars	1975 Percent	1977 Millions of Dollars	1977 Percent	Percent Change 1975-1977
Total	$14,158	100.0	$18,326	100.0	29.4
Farm	341	2.4	411	2.2	20.5
Nonfarm	13,817	97.6	17,914	97.8	29.7
Private	11,392	80.5	15,137	82.6	32.9
Agriculture	30	0.2	37	0.2	23.3
Mining	960	6.8	1,435	7.8	49.5
Construction	1,244	8.8	1,789	9.8	43.8
Manufacturing	2,427	17.1	3,207	17.5	32.1
Nondurable Goods	1,361	9.6	1,792	9.8	31.7
Durable Goods	1,067	7.5	1,414	7.7	32.5
Transportation, Communications and Public Utilities	1,399	9.9	1,764	9.6	26.1
Wholesale Trade	1,006	7.1	1,288	7.0	28.0
Retail Trade	1,501	10.6	1,952	10.7	30.0
Finance, Insurance and Real Estate	639	4.5	843	4.6	31.9
Services	2,161	15.3	2,792	15.2	29.2
Government	2,425	17.1	2,778	15.2	14.6
Federal Civilian	446	3.2	529	2.9	18.6
Federal Military	319	2.3	296	1.6	- 7.2
State and Local	1,660	11.7	1,952	10.7	17.6

SOURCE: Louisiana State Planning Office based on data from U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Information System.

EMPLOYMENT

Agriculture was the dominant employment sector in Louisiana until 1940. Technological advances during the decades following 1940 permitted enormous increases in agricultural production and substantial reductions in labor requirements. Accompanying the decline in agricultural employment was an increase in manufacturing employment. The manufacturing sector also benefited from technological developments: improvements in labor productivity contributed to higher per capita income, which allowed an increase in the proportion of personal income devoted to purchases of services sector goods.

The increasing proportion of budget expenditures for service goods coupled with higher personal income resulted in greater demand in the services sector. Heightened services sector demand necessitated expanded production by service industries and increased employment in the sector. By 1970 the four largest employment sectors in Louisiana were wholesale and retail trade (22.1 percent of total employment); government (20.5 percent); manufacturing (16.8 percent); and services (15.1 percent).

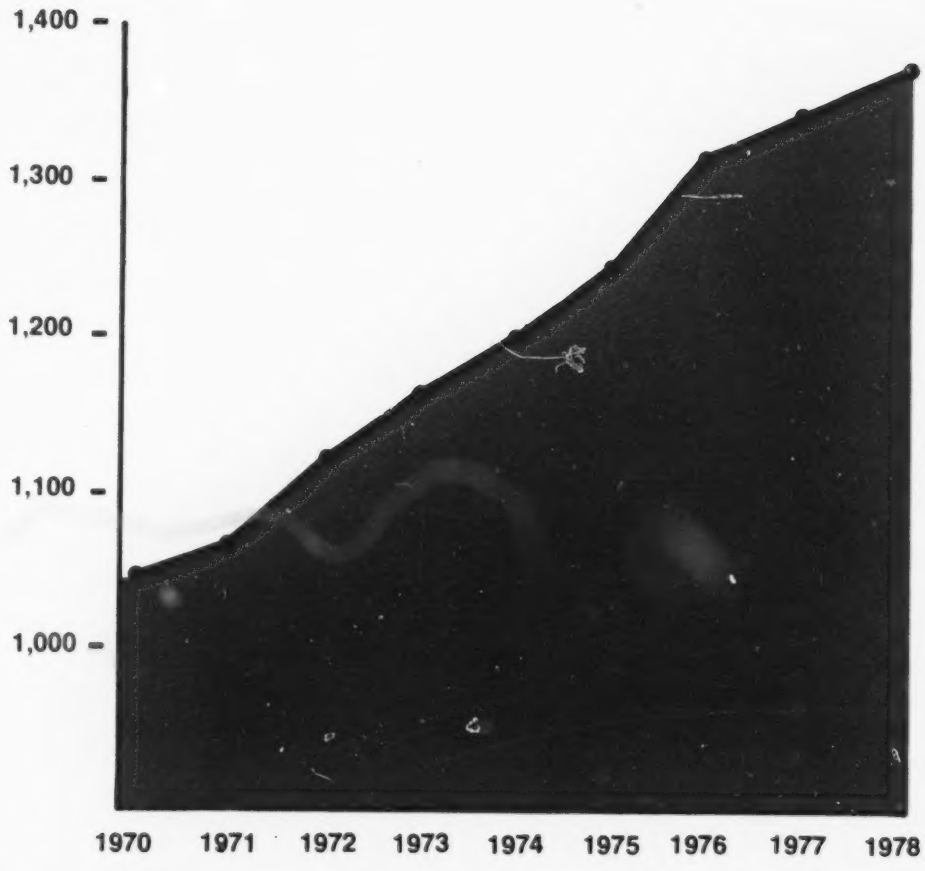
Total employment in Louisiana increased by 31 percent from 1970 to 1978; the employment to population ratio rose from .286 (1970) to .344 (1978). Figure 1-5 illustrates the pattern of total nonagricultural employment growth during this period. The effect of the 1974 recession was virtually unnoticed in Louisiana, with only a slight decline in the employment growth rate that year.

Table 1-14 contains employment by sector in Louisiana for 1970, 1974 and 1978. Although total employment grew at a steady rate between 1970 and 1978, some rather substantial interindustry employment shifts occurred. Three sectors (government; services; and finance, insurance and real estate) provided fewer new jobs in the latter half of the period, while a fourth sector (mining) increased markedly as a new job source. This shift in relative employment growth rates seems to confirm the idea that the 1973 oil embargo has been the source of new impetus for economic activity in the state. This is further illustrated in Figure 1-6 which shows a rapid increase in mining employment beginning in 1974.

The differentials in employment growth rates among industries have altered the relative importance of the various sectors in Louisiana employment. Trade sector employment has continued to increase since 1970 (Table 1-15). By 1978 this sector accounted for 23.9

FIGURE 1-5

TOTAL NONAGRICULTURAL EMPLOYMENT IN LOUISIANA, 1970-1978



SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economics Information System.

TABLE 1-14
TOTAL NONAGRICULTURAL EMPLOYMENT IN LOUISIANA BY SECTOR, 1970, 1974 and 1978 (thousands)

Sector	1970	1974	1978	Percent Change 1970-1974	Percent Change 1974-1978
Mining	50.7	54.1	68.1	6.7	25.9
Construction	73.8	89.4	107.1	21.1	19.8
Manufacturing	175.4	185.9	205.6	6.0	10.6
Transportation and Public Utilities	92.6	99.4	105.6	7.3	6.2
Wholesale and Retail Trade	230.0	271.9	326.0	18.2	19.9
Finance, Insurance and Real Estate	48.7	58.2	67.8	19.5	16.5
Services	157.2	192.7	230.2	22.6	19.5
Government	213.2	240.4	254.7	12.8	5.9
Total	**1,041.6**	**1,192.0**	**1,365.1**	**14.4**	**14.5**

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economics Information System.

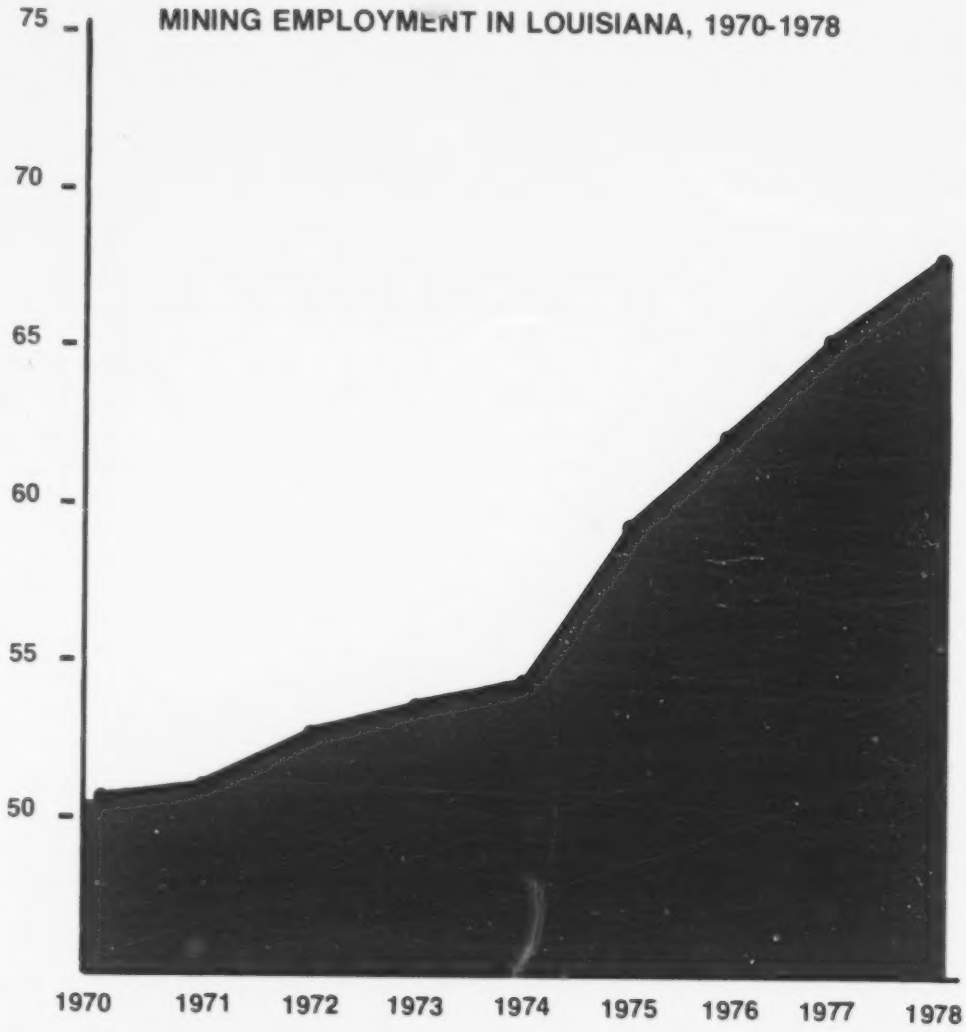
percent of total nonagricultural employment. The services sector has grown as rapidly during the 1970s, with 230,000 persons employed in 1978—16.9 percent of total nonagricultural employment. In addition, rising income and consumer expenditures have spurred employment increases in the finance, insurance and real estate sector.

The construction industry has experienced steady growth during the 1970s. This industry accounted for 7.9 percent of Louisiana's nonagricultural employment in 1978. The long-term growth of the construction industry over the past several decades reflects structural changes in the Louisiana economy. Increased urban and suburban development has fostered greater construction activity. Moreover, increased highway construction and the building of factories and other industrial structures have created additional construction employment.

Industrialization, urbanization and rising per capita income in the South broadened the markets and industrial base for the manufacturing sector in Louisiana and other southern states. As a source of employment, however, manufacturing has not been as significant for Louisiana as for other states in the Sun Belt. Total employment in manufacturing rose during the years 1970 through 1978 (Table 1-14); but the importance of manufacturing declined during this period,

FIGURE 1-6

MINING EMPLOYMENT IN LOUISIANA, 1970-1978



SOURCE: U. S. Department of Commerce, Bureau of Economic Analysis, Regional Economics Information System.

since manufacturing employment increased at a slower rate than did employment in other sectors (Table 1-15). The manufacturing sector was the third largest employment sector in the state in 1970; it had fallen to fourth place by 1978. The relative employment opportunities offered by manufacturing in Louisiana are below the national average.

TABLE 1-15
PERCENTAGE OF NONAGRICULTURAL EMPLOYMENT IN LOUISIANA BY SECTOR, 1970, 1974 and 1978*

Sector	Percent 1970	Percent 1974	Percent 1978
Mining	4.8	4.5	5.0
Construction	7.1	7.5	7.9
Manufacturing	16.8	15.6	15.1
Transportation and Public Utilities	8.9	8.3	7.7
Wholesale and Retail Trade	22.1	22.8	23.9
Finance, Insurance and Real Estate	4.7	4.9	5.0
Services	15.1	16.2	16.9
Government	20.5	20.2	18.7

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economics Information System.

* Columns may not total 100 percent due to rounding.

Unemployment

Louisiana's unemployment rate in 1978 was 7 percent—1 percent higher than the national rate (Table 1-16). Two adjacent states,

TABLE 1-16

UNEMPLOYMENT RATE FOR THE UNITED STATES, LOUISIANA AND CONTIGUOUS STATES, 1976-1981

State	Percent 1976	Percent 1977	Percent 1978	Percent 1979	Percent 1980	Percent 1981
United States	7.7	7.0	6.0	6.4	7.5	7.4
Louisiana	6.8	7.0	7.0	6.9	7.2	6.7
Arkansas	7.1	6.5	6.2	7.1	8.0	7.5
Mississippi	6.5	7.3	7.4	7.6	7.9	7.7
Texas	5.7	5.3	4.8	5.1	5.5	5.2

SOURCE: Louisiana State Planning Office.

Arkansas and Texas, had lower unemployment rates (6.2 percent and 4.8 percent, respectively), while a third, Mississippi, had a higher rate (7.4 percent). The unemployment rate in Louisiana should decline during 1979, then rise in 1980 to a level of 7.2 percent and fall again in 1981 to 6.7 percent. The projected 1981 rate would be lower than the estimated national rate for that year. Throughout the 1980s unemployment in Louisiana should continue to decline.

Trends

Total nonagricultural employment should grow at a slower rate in the decade from 1977 to 1987 (2.6 percent) than during the preceding decade (2.9 percent). Technological advances during recent decades have contributed to rising per capita income but have created labor surpluses in the primary and secondary economic sectors and permitted the tertiary sectors (services and trade) to grow fairly rapidly. The tertiary sectors have experienced significant and steady growth; yet, these sectors derive less direct benefit from technological innovation than do primary and secondary sectors. As a result, the growing employment in the trades and services sectors in the state will probably lead to a slower rate of growth in per capita income.

The decline in agricultural employment that has continued through the 1970s in the state appears to be ending. Employment opportunities in agriculture, forestry and other primary sectors should develop as the growth in national and international populations increasingly taxes available agricultural resources.

Fundamental changes in worldwide energy demand-supply conditions appear to have occurred following the 1973 OPEC embargo. If this is the case, energy prices should rise more rapidly than prices of other goods; and Louisiana, as a basic energy-producing state, will experience economic gains relative to energy-importing states.

CONCLUSION

Population, income and employment, as critical measures of the state's economy, require continual monitoring from the viewpoint of both state and national socioeconomic trends. Clearly, Louisiana's economy will be affected—both short-term and long-term—by changes in population (as reflected by the 1980 Census), by the current national energy crisis, by the continuing inflationary pressures and by the general slowdown of the national economy. Thus, socioeconomic indicators must be constantly evaluated to maintain the vitality of the Louisiana economy.

Chapter 2

The orderly development of commerce in Louisiana—i.e., industry, business, labor and communications—results in both economic well-being for state government and the private sector and concomitant benefits for citizens. As a part of the Sun Belt, Louisiana has enjoyed unprecedented economic growth during the 1970s. Among the many attributes of Louisiana conducive to economic growth are a skilled work force, diverse natural resources, pleasant climate and a positive state government attitude toward the development of commerce.

INDUSTRY

Industrial Development

Based on figures compiled by the Louisiana Department of Commerce, Office of Commerce and Industry, industrial investment in new and expanded industries in Louisiana during 1977 equaled $2.3 billion—a 110 percent increase over 1976 and twice the amount that the state had been averaging for industrial investment during the preceding six years. The $2.3 billion investment represented 444 new and expanded industries—52 new plants ($1 billion) and 392 expansions of existing plants ($1.3 billion)—and was expected to generate 31,188 jobs, including 6,188 new permanent jobs and 25,000 construction jobs. Annual payrolls resulting from the investment were estimated to equal $76.2 million for permanent jobs and $709.5 million for construction jobs. (These are jobs accruing from investments by industries participating in the state's tax deferral and bond issue programs; the numbers do not reflect other jobs created by companies not applying for tax deferrals or bond issues.)

The sales tax on buildings and equipment for the 1977 investment projects was estimated to equal $45.7 million for the state and $20.8 million for local governments.

According to the prestigious national publication, **Industrial Development,** Louisiana ranked first nationally in the number of industrial expansions in 1978. Louisiana also led the nation in the value of industrial expansions with 151 projects in excess of $500,000 each.

Louisiana's number one ranking in industrial expansion is in part attributable to the state's two industrial growth incentive programs—tax exemptions and industrial revenue bonds. These programs were initiated to encourage industries either to locate in the state or to expand their existing Louisiana operations.

Figures from the Office of Commerce and Industry reveal that 508 projects (66 new manufacturing operations and 442 expansions of existing plants) representing a total investment of $2.5 billion ($596.3 million in new industrial operations and $1.9 billion in expansions of existing Louisiana facilities) took advantage of the two state incentive programs in 1978 (Table 2-1). The new industrial projects are expected to generate 4,399 permanent jobs and 6,580 construction jobs; the expansions of existing plants should create 3,928 permanent jobs and 24,878 construction jobs—i.e., 8,327 permanent jobs and 31,458 construction jobs should result from the 508 projects.

TABLE 2-1
COUNT OF TAX EXEMPTIONS AND BONDS FOR LOUISIANA, 1978

	No.	Permanent Jobs	Construction Jobs	Application Amount
New Plants				
Exemptions	58	3,291	6,552	$ 577,818,794
Bonds	8	1,108	28	18,450,000
Total	**66**	**4,399**	**6,580**	**$ 596,268,794**
Plant Expansions				
Exemptions	430	3,788	23,758	$1,838,128,781
Bonds	12	140	1,120	62,750,000
Total	**442**	**3,928**	**24,878**	**$1,900,878,781**
GRAND TOTAL	**508**	**8,327**	**31,458**	**$2,497,147,575**
Total Jobs			**39,785**	

SOURCE: Louisiana Department of Commerce, Office of Commerce and Industry.

Table 2-2 illustrates the steady growth of Louisiana industrial investment in the period from 1968 to 1978. The five parishes with the largest industrial investments in 1977 were St. Charles, $624,263,797; Pointe Coupee, $591,651,320; West Baton Rouge, $215,337,235; Iberville, $127,983,232; and East Baton Rouge, $109,382,220. The Shreveport area, comprised of Bossier, Webster and Caddo parishes, led the state with 1,450 new permanent jobs in 1977. These additional figures do not include the General Motors assembly plant scheduled for construction in Shreveport at a cost of over $200 million. The General Motors plant will employ 4,500 people.

TABLE 2-2
INDUSTRIAL INVESTMENT IN LOUISIANA
1968-1978

Year	Investment
1968	$ 624,252,625
1969	579,263,687
1970	609,578,850
1971	668,997,687
1972	1,881,161,423
1973	561,208,491
1974	1,331,534,993
1975	1,500,458,631
1976	1,108,390,380
1977	2,327,954,409
1978*	4,400,000,000
Total	**$15,592,801,176**

SOURCE: Louisiana Department of Commerce, Office of Commerce and Industry.

* Figure for 1978 is estimated.

The healthy industrial climate of the state is reflected in the number of new plants and expansions announced in 1978. (In order to reflect more accurately the actual industrial activity in a given year, the Research Division of the Office of Commerce and Industry established in January 1978 a new method of counting jobs and investments. The new method—a compilation of tax exemption advance

TABLE 2-3
NEW PLANT AND EXPANSION ANNOUNCEMENTS AND THEIR ECONOMIC IMPACT, LOUISIANA, 1978

	No.	Permanent Jobs	Construction Jobs	Investment*	Estimated State Tax†	Estimated Local Tax‡	First Year Economic Impact§
New Plants	74	9,219	7,877	$1,971,371,000	$40,452,535	$18,654,160	$ 641,100,000
Plant Expansions	208	3,311	12,219	2,031,679,824	41,690,070	21,476,232	582,375,000
Total	**282**	**12,530**	**20,096**	**$4,003,050,824**	**$82,142,605**	**$40,130,392**	**$1,223,475,000**
Total Jobs			**32,636**				

SOURCE: Louisiana Department of Commerce, Office of Commerce and Industry.

* Includes construction labor.
† Based on 3 percent of investment less 1977 construction labor factor of 31.6 percent.
‡ Based on local city and parish taxes (percent of investment less construction labor factor).
§ Total jobs times average salary of $15,000 per year times a multiplier factor of 2.5.

notifications, industrial bond issues and newspaper clippings from throughout the state—is not comparable to the accounting of tax exemptions and bonds, since the tax and bond method may include initial activity prior to 1978.) In 1978 a total of 282 new plants and expansions were announced. The 282 projects should generate 32,636 jobs—12,530 permanent jobs and 20,096 construction jobs—for an estimated first year impact on the Louisiana economy of over $1.2 billion (Table 2-3).

Capital investments in the announced new plants and expansions are expected to exceed $4 billion. Table 2-4 depicts numbers of jobs and dollar investments for those announced projects exceeding $10 million. The 15 announced projects (5.3 percent of the total announcements) exceeding $50 million each accounted for 21.8 percent of total permanent jobs, 49.8 percent of total construction jobs and 79.4 percent of total investments.

TABLE 2-4
NEW PLANT AND EXPANSION ANNOUNCEMENTS FOR LOUISIANA, 1978

		Permanent	Construction	
	No.	**Jobs**	**Jobs**	**Investment**
$50 Million And Over				
New Plants	6	2,391	5,800	$1,672,000,000
Plant Expansions	9	334	4,203	1,507,819,000
Total	**15**	**2,735**	**10,003**	**$3,179,819,000**
$25 To $49 Million				
New Plants	3	1,700	130	$ 86,234,000
Plant Expansions	4	78	1,475	130,564,000
Total	**7**	**1,778**	**1,605**	**$ 216,798,000**
$10 to $24 Million				
New Plants	6	1,025	451	$ 96,675,000
Plant Expansions	11	669	2,657	191,323,700
Total	**17**	**1,694**	**3,108**	**$ 287,998,700**

SOURCE: Louisiana Department of Commerce, Office of Commerce and Industry.

Chemical and associated products industries ranked first in both dollars invested and number of new plants and expansions proposed. There were 56 announcements representing a total of $1.8 billion of capital investment, 1,477 permanent jobs and 7,953 temporary construction jobs.

Other manufacturing groups with major investments included transportation equipment with $260.7 million, 2,022 permanent and 1,866 construction jobs (including the General Motors Assembly Plant in Caddo Parish); primary metals industries with $189.1 million, 2,003 permanent and 1,962 construction jobs (Bayou Steel in St. John the Baptist Parish); and paper and allied products manufacturers with $112.3 million, 72 permanent and 1,334 construction jobs (Crown Zellerbach in Washington Parish).

The leading parishes by dollar investments for new plants and plant expansions are shown in Table 2-5.

TABLE 2-5
LEADING PARISHES BY DOLLAR INVESTMENT FOR NEW MANUFACTURING PLANTS AND PLANT EXPANSIONS

Parish	Number	Investment
New Manufacturing Plants		
Red River	1	$900,000,000
Calcasieu	5	223,961,000
Caddo	2	219,250,000
Iberville	3	158,500,000
St. Charles	4	137,960,000
St. John	1	103,000,000
Plant Expansions		
St. Charles	22	$769,470,000
Calcasieu	29	301,881,500
Rapides	3	267,743,000
Ascension	17	231,515,000
Iberville	13	109,044,000

SOURCE: Louisiana Department of Commerce, Office of Commerce and Industry.

Manufacturing and Mining

The substantial industrial investment levels of 1978 resulted in a considerable increase in manufacturing and manufacturing employment, a primary goal of the state. Table 2-6 shows 1978 investment by Standard Industrial Classification group. The manufacturing of fabricated metals, food and kindred products, machinery, and wood and paper products accounts for a considerable portion of the total 1978

TABLE 2-6
INVESTMENT BY STANDARD INDUSTRIAL CLASSIFICATION (SIC), LOUISIANA, 1978

SIC Group	Investment*
Food and Kindred Products	$ 22,694,840
Textile Mill Products	1,121,439
Apparel	3,187,576
Lumber and Wood Products, Except Furniture	56,323,724
Furniture and Fixtures	393,009
Paper and Allied Products	58,593,283
Chemicals and Allied Products	1,777,251,454
Petroleum Refining and Related Industries	388,185,544
Rubber and Miscellaneous Plastic Products	2,882,364
Stone, Clay, Glass and Concrete Products	2,973,540
Primary Metals Industries	24,986,967
Fabricated Metal Products, Except Machinery and Transportation Equipment	14,857,534
Machinery, Except Electrical	5,783,437
Electrical Machinery, Equipment and Supplies	6,718,832
Transportation Equipment	13,064,142
Miscellaneous Manufacturing Industries	20,596
Total	**$2,379,038,281**

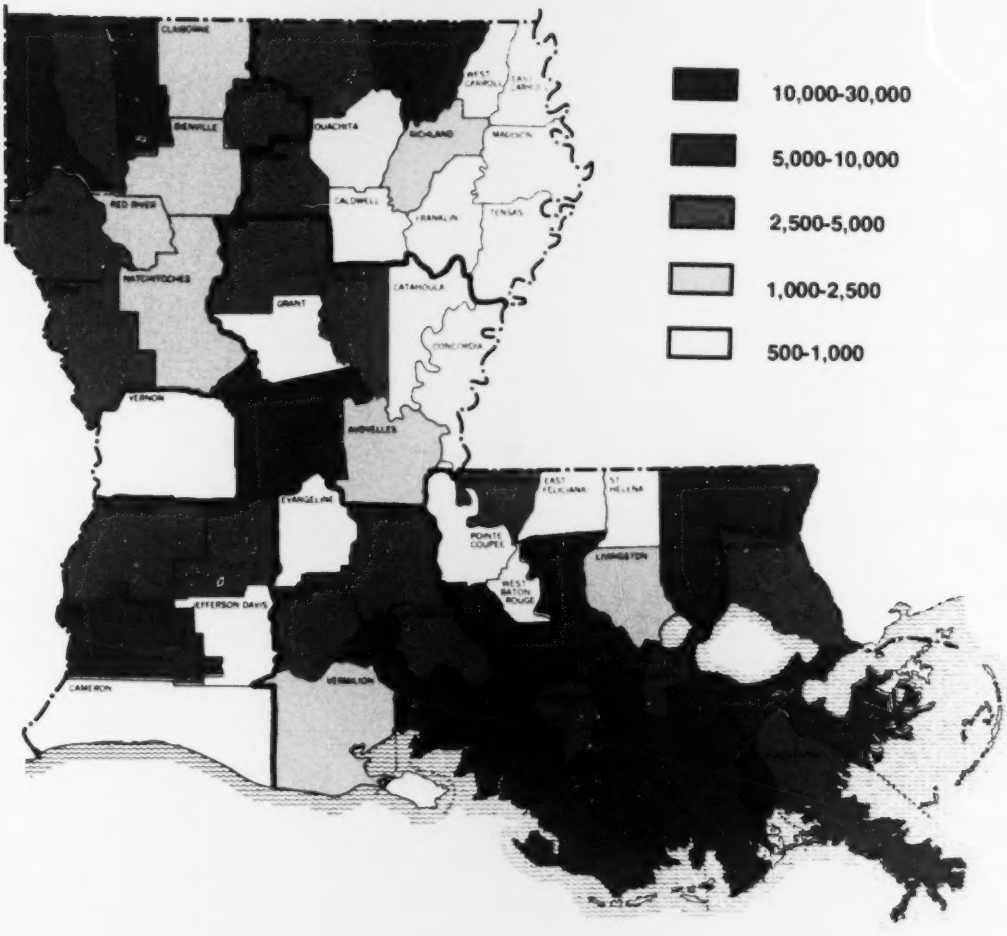
SOURCE: Louisiana Department of Commerce, Office of Commerce and Industry.

* Investment figures are based on the two state incentive programs and cannot be compared with figures based on new plant and expansion announcements.

industrial investment. The petrochemical industry, however, continues to constitute the bulk of the total investment. Figure 2-1 shows employment concentration in manufacturing industries by parish. The largest concentrations of manufacturing employees are in the areas around Baton Rouge, New Orleans, Lake Charles and Shreveport.

FIGURE 2-1

MANUFACTURING CONCENTRATION BY EMPLOYMENT



SOURCE: Louisiana Department of Commerce, Office of Commerce and Industry.

Manufacturing in Louisiana is concentrated in the East Central region of the state. In 1977 the eleven parishes of East Central Louisiana (Ascension, East Baton Rouge, East Feliciana, Iberville, Livingston, Pointe Coupee, St. Helena, Tangipahoa, Washington, West Baton Rouge and West Feliciana) produced $7.9 billion in manufacturing shipments—almost 60 percent of Louisiana's total shipments in 1977.

Mining is a critically important sector of the Louisiana economy. The production of raw minerals (both fuel and nonfuel minerals) provides substantial state revenue, personal income and employment opportunities. Louisiana ranks first in the nation in the production of both natural gas and salt and second nationally in the production of petroleum and sulfur. The mining industry in Louisiana employs approximately 72,700 people (1978). Table 2-7 provides data on total number of workers involved in the oil and gas industry alone, by type of work.

According to estimates by the U.S. Department of the Interior, Bureau of Mines, the value of raw mineral production in Louisiana during 1977 totaled $10.5 billion—an increase of 21 percent over the 1976 total, and a new record. Mineral fuels production accounted for approximately 97 percent of the total value of mineral production. Moreover, projections by the U.S. Department of Commerce, Bureau of the Census, indicate that the value added in 1977 by the Louisiana petroleum industry alone should be in excess of $8 billion. (Chapter 5, "Natural Resources and Energy," provides a definitive discussion on minerals—production and consumption—and their importance to Louisiana.)

BUSINESS

Insurance and Finance

The 1977 grand total of direct premiums earned for all lines of insurance in Louisiana was approximately $2.6 billion—an increase of more than $300 million over the 1976 figure, $2.3 billion. The marked increase was fairly evenly distributed throughout the various lines of insurance. Table 2-8 provides a recapitulation of all insurance business transacted in the state during 1977. A compilation of insurance excise license taxes and fees collected is shown in Table 2-9.

Another reflection of Louisiana's economic expansion is the growth of financial institutions throughout the state. The Department

TABLE 2-7
TOTAL WORKERS IN LOUISIANA OIL AND GAS INDUSTRY, 1968-1978

Year	Production	Refining	Chemicals	Oil, Product Pipelines	Gas Utilities	Marketing	Total
1968	47,200	10,500	22,300	900	5,800	15,800	102,500
1969	48,300	9,700	23,500	900	5,900	15,900	104,200
1970	47,300	9,600	23,700	900	5,950	15,750	102,700
1971	48,000	9,600	23,900	900	6,200	15,700	103,400
1972	49,200	9,500	24,300	900	6,100	15,900	105,900
1973	49,800	9,600	25,300	900	6,100	14,500	106,200
1974	49,900	9,900	26,800	900	6,800	13,600	107,900
1975	54,800	9,600	27,300	950	6,500	14,700	113,850
1976	58,200	9,700	29,300	900	6,000	14,400	118,500
1977	61,300	9,300	31,100	900	5,800	15,400	123,800
1978	69,000	10,600	31,700	1,000	5,600	15,400	133,300

SOURCE: Louisiana Department of Labor, Office of Employment Security.

of Commerce reports that total resources of the 202 state chartered banks in 1978 rose from $8.3 billion (December 1977) to $9.4 billion (December 1978)—an increase of 11.9 percent. One of the primary financial growth indicators, deposits, rose $943.7 million during the same time period. Capital accounts in state chartered banks increased by $86.9 million during 1978. Capital accounts for the period equaled $689.2 million, with the following changes in the various segments of the account: Capital Stock $125.7 million, up $8.8 million; Surplus $278.5 million, up $32.8 million; Undivided Profits and Reserves $285 million, up $91.6 million.

Capital funds and reserves comprised 7.3 percent of total resources in December 1978. Table 2-10 illustrates both the ranking and assets of Louisiana's fifteen largest national banks. Deposits in commercial banks in the state during the period from 1966 to 1978 are shown in Table 2-11.

Retail Trade

Total retail sales statewide rose from $10.5 billion (1976) to $11.6 billion (1977)—an increase of 11.2 percent. Total effective buying income in Louisiana increased from $17.6 billion (1976) to $20 billion (1977)—an increase of 13.7 percent. Data on retail sales and effective buying income in Louisiana for 1976 and 1977 are provided in Table 2-12. (Figures for individual parishes are available from the Louisiana Department of Commerce.)

Foreign Investment and Trade

Investment in Louisiana by foreign firms through 1977 equaled $3.5 billion. This total investment by 114 firms from 23 foreign countries ranks Louisiana fourth nationally and first among southern states, according to **South Magazine.** In 1977 alone, foreign investment in Louisiana totaled $417 million.

During 1976, the value of total shipments of manufactured goods in Louisiana was $25.2 billion, and the estimated value of exports (manufactured goods) was $1.4 billion. Three of the sixteen southern states (Georgia, North Carolina and Texas) ranked higher than Louisiana in value of total shipments; just two southern states (North Carolina and Texas) ranked above Louisiana in estimated value of exports.

Louisiana has the second and fourth highest ranking ports in the nation—New Orleans and Baton Rouge. Lake Charles is also an important deepwater port for international trade.

TABLE 2-8
RECAPITULATION OF ALL INSURANCE BUSINESS TRANSACTED IN LOUISIANA, 1977

All Companies Other Than Life	Direct Premiums Written	Direct Premiums Earned	Direct Losses Paid Deducting Salvage	Direct Losses Incurred
Fire	$ 66,247,949	$ 62,394,587	$ 61,680,478	$ 32,096,386
Allied Lines	52,856,581	49,741,663	25,921,220	9,617,181
Farmowners multiple peril	352,154	276,891	334,232	264,076
Homeowners multiple peril	141,499,946	125,536,718	50,510,180	51,284,534
Commercial multiple peril	68,524,028	63,671,338	28,167,332	30,910,088
Ocean marine	58,712,040	57,810,188	38,839,515	44,685,591
Inland marine	32,919,791	30,167,335	12,509,503	11,696,705
Miscellaneous	1,252,938	997,113	229,677	194,267
Medical malpractice	17,364,662	16,120,237	1,935,898	2,335,210
Earthquake	13,647	11,740	9,198	9,198
Group accident and health	12,448,884	12,155,554	11,096,536	11,622,722
Credit A and H (Group and Individual)	1,585,868	1,085,038	504,556	596,877
Collectively renewable A and H	1,393,894	1,420,165	892,559	1,168,259
Non-cancellable A and H	155,187	144,776	38,722	51 139
Guaranteed renewable A and H	1,983,885	1,896,753	1,339,910	1,438,351
Non-renewable for stated reasons only	452,306	436,300	263,429	395,646
Other accident only	773,510	747,677	211,570	200,029
All other A and H	1,527,515	1,662,941	1,245,742	1,171,176
Workmen's compensation	253,183,394	248,949,358	130,468,051	206,013,614
Other liability	118,182,099	111,027,451	50,849,128	71,359,262
Private passenger auto no-fault (personal injury protection)	1,087	1,274	23,742	23,359
Other private passenger auto liability	241,192,017	229,402,425	129,909,908	148,062,114
Commercial auto no-fault (personal injury protection)	6,760	6,887	1,075	18,916
Other commercial auto liability	87,875,280	79,567,667	44,264,413	57,555,717
Private passenger auto physical damage	131,993,024	142,464,793	80,709,496	81,326,746
Commercial auto physical damage	30,393,199	27,028,082	14,040,473	14,414,995
Aircraft (all perils)	5,307,918	5,539,603	4,314,626	4,522,878

Fidelity	4,250,374	4,130,333	1,585,164	3,398,597
Surety	17,358,608	14,734,662	4,649,328	1,969,061
Glass	309,289	319,315	132,082	138,642
Burglary and theft	1,576,093	1,469,181	436,339	497,073
Boiler and machinery	10,813,146	10,878,676	1,350,124	9,464,025
Credit	4,834,403	4,938,659	556,993	933,219
Title	5,061,320	4,793,730	388,401	258,285
Totals All Companies Other Than Life	**$1,392,403,178**	**$1,311,054,964**	**$699,408,554**	**$799,657,150**
Surplus Line Premiums Written Only	**$ 125,555,426**			

All Life Companies	**Premiums Received**	**Claims Paid**
Louisiana Life Companies		
Ordinary	$ 32,514,646	$ 14,394,808
Group	26,046,004	7,911,474
Industrial	43,918,867	10,036,566
Accident and Health	46,366,835	28,721,299
Consideration for Annuities	4,113,010	.....
Louisiana Industrial Life Companies	13,780,640	3,568,271
Louisiana Hospital and Medical Service Companies	188,331,269	175,181,541
Louisiana Service and Assessment Companies	196,233	60,720
Louisiana Non-Profit Funeral Associations (Non-Profit Department)	500,590	444,785
Louisiana Non-Profit Funeral Associations (Industrial Department)	299,867	64,129
Other State Life Companies	904,547,213	521,790,282
Fraternal Orders (All States)	9,433,278	2,614,575
Totals All Life Companies	**$1,270,048,452**	**$764,788,450**
GRAND TOTAL ALL LINES	**$2,581,103,416**	

SOURCE: Louisiana Department of Insurance, **Report of Commissioner of Insurance for 1977.**

TABLE 2-9
INSURANCE EXCISE LICENSE TAXES AND FEES COLLECTED, LOUISIANA, 1977

Life, Health and Accident	$15,598,320.01
Fire, Casualty and Miscellaneous	21,588,971.66
Fire Marshall	1,713,417.60
Retaliatory Tax	576,698.48
Annual Statement and Certificate of Authority	63,950.00
Agents' Licenses	341,567.00
Brokers' Licenses	36,955.00
Fees Miscellaneous	50,434.48
Security Registration	7,707.50
Agents' Qualification Fees	70,340.00
Insurer Examination	109,261.65
Total	**$40,157,623.38**

SOURCE: Louisiana Department of Insurance, **Report of Commissioner of Insurance for 1977.**

The Port of New Orleans, an agglomerate of public and private facilities, handles more annual tonnage and general cargo than any port in the country except the port of New York and is the largest grain exporter in the world. The New Orleans port generates more than $2 billion a year in wages and taxes.

The Port of Baton Rouge, ranked fourth in the nation, is the first downstream river port at which cargoes can be transferred from barges to ocean-going vessels for export. Approximately 90 percent of the more than 70 million tons of cargo handled by the port in 1977 was dry bulk cargo. The Baton Rouge port is unique in two respects: it is the only Louisiana port that provides pipeline service; it is the only port in the state that does not offer railroad piggyback service.

The Port of Lake Charles processed in excess of 20 million tons of cargo in 1977. Although the Lake Charles port is the nation's major rice terminal, the largest single commodity handled at the port is crude petroleum.

In addition to the three deepwater ports, more than 20 smaller ports in Louisiana ship and receive cargo via the Mississippi, Atchafalaya and Ouachita-Black rivers and other waterways. Louisiana's waterways are serviced by 198 barge lines and 132 steamship lines.

TABLE 2-10
RANKING AND ASSETS OF MAJOR NATIONAL BANKS IN LOUISIANA, 1978

Bank	Location	Rank	Total Assets September 1978 (thousands)
Whitney National Bank of New Orleans	New Orleans	1	$1,607,073*
First National Bank of Commerce	New Orleans	2	853,000
Hibernia National Bank in New Orleans	New Orleans	3	846,000
Louisiana National Bank	Baton Rouge	4	601,000
First National Bank in Shreveport	Shreveport	5	548,000
Commercial National Bank	Shreveport	6	523,000
The Calcasieu-Marine National Bank	Lake Charles	7	413,000
Fidelity National Bank	Baton Rouge	8	393,000
National American Bank of New Orleans	New Orleans	9	337,251*
The Ouachita National Bank in Monroe	Monroe	10	313,000
City National Bank of Baton Rouge	Baton Rouge	11	272,000
First National Bank of Jefferson Parish	Gretna	12	245,719*
The First National Bank of Lafayette	Lafayette	13	199,000
The National Bank of Commerce in Jefferson Parish	Jefferson Parish	14	175,730*
First National Bank of Houma	Houma	15	164,000

SOURCE: **Louisiana Almanac 1979-1980.**

* December 31, 1978 figure.

TABLE 2-11
AMOUNT OF DEPOSITS BY TYPE IN COMMERCIAL BANKS, LOUISIANA, 1966-1978

Year	Number of Banks	Number of Banking Offices	Total Deposits* (thousands)	Demand Deposits (thousands)	Savings Deposits (thousands)	Other Time Deposits (thousands)
1966	222	487	$ 4,453,036	$1,887,629	$1,066,163	$ 283,342
1968	233	543	5,253,438	2,066,532	1,131,686	677,332
1970	235	610	5,929,675	2,225,635	1,146,991	1,058,845
1972	238	667	7,965,652	2,712,959	1,506,943	1,690,059
1974	248	759	9,915,485	3,217,000	1,777,384	2,584,331
1976	261	858	12,039,550	3,716,668	2,420,037	3,112,469
1978	254	943	15,282,704	4,647,548	3,070,610	3,942,759

SOURCE: Louisiana State Planning Office based on data from Federal Deposit Insurance Corporation, **Summary of Deposits.**

* Total includes deposits of state and political subdivisions.

TABLE 2-12
RETAIL SALES AND EFFECTIVE BUYING INCOME IN LOUISIANA, 1976 and 1977

	1976	1977	Absolute Change	Percent Change
Effective Buying Income				
Total (thousands)	$17,600,651	$20,007,658	$2,407,007	13.7
Median Household	11,865	13,162	1,297	10.9
Average Household	14,318	15,848	1,530	10.7
Per Capita	4,559	5,089	530	11.6
Retail Sales				
Total (thousands)	$10,465,640	$11,642,110	$1,176,470	11.2
Per Household	8,513	9,221	708	8.3
Retail Sales by Store Group (thousands)				
Food	$ 2,680,531	$ 2,961,808	$ 281,277	10.5
Eating and Drinking Places	830,973	991,963	160,990	19.4
General Merchandise	1,405,232	1,523,888	118,656	8.4
Furniture, Appliances	527,181	534,933	7,752	14.7
Automotive	1,976,747	2,325,325	348,578	17.6
Drug	367,129	395,370	28,241	7.7

SOURCE: Louisiana State Planning Office based on data from Louisiana Department of Commerce, Office of Commerce and Industry, Division of Research and Planning, **1977 and 1978 Survey of Buying Power, Sales and Marketing Management.**

The Louisiana Superport, a $1 billion oil terminal located approximately 19 miles south of the mouth of Bayou Lafourche in the Gulf of Mexico, will consist of an offshore terminal for unloading crude oil from supertankers, offshore and onshore pipelines for transporting the oil to storage facilities, and feeder pipelines for delivering the oil to refineries in Louisiana and the Midwest. Phase one of a three-phase construction program for the Superport began in December 1978 and is scheduled for completion in the first quarter of 1981. The handling capacity of phase one will be 1.4 million barrels per day; ultimate handling capacity of the privately financed project will be 3.4 million barrels per day.

The facility, developed by the Louisiana Offshore Oil Port, Inc., is expected to generate thousands of jobs and approximately $4.5 billion of new investment in refineries, petrochemical plants and related industries.

Agribusiness

The role of agriculture in the Louisiana economy has changed markedly in recent years. Once the most important sector in the Louisiana economy, agriculture has declined in importance relative to other economic sectors in the state; nonetheless, the agricultural sector continues to be an essential element in the Louisiana economy.

Cash farm income in Louisiana equaled $1.3 billion in 1977—two percent below the record high of 1976, but fifteen percent above the 1975 total. Figure 2-2 shows the distribution of cash farm income in the state. The decline of total cash farm income in 1977 resulted primarily from lower cash receipts for soybeans, rice and cotton. The decrease in receipts for the three crops was only partially offset by higher receipts for pecans, cattle, chickens, sweet potatoes and government payments. Total income for field crops equaled $800.8 million, down $88.5 million from 1976; income for livestock and livestock products totaled $406 million, up $4.6 million. Fruits, nuts and vegetables brought in $33 million, up $13.9 million from 1976—primarily because of higher receipts for pecans. Cash farm income from government payments equaled $44.4 million—a dramatic increase of $36.9 million over the 1976 figure.

Cash farm income from Louisiana's major farm products in 1977 included soybeans, $319 million (down $64.6 million from 1976); cattle, $185.8 million (up $8.2 million); cotton, $179.5 million (down $12.4 million); rice, $170.9 million (down $15.6 million); dairy products, $114.5 million (down $2.8 million); sugarcane, $101.6 million (up $1.7 million); and chickens, $59.4 million (up $6.6 million).

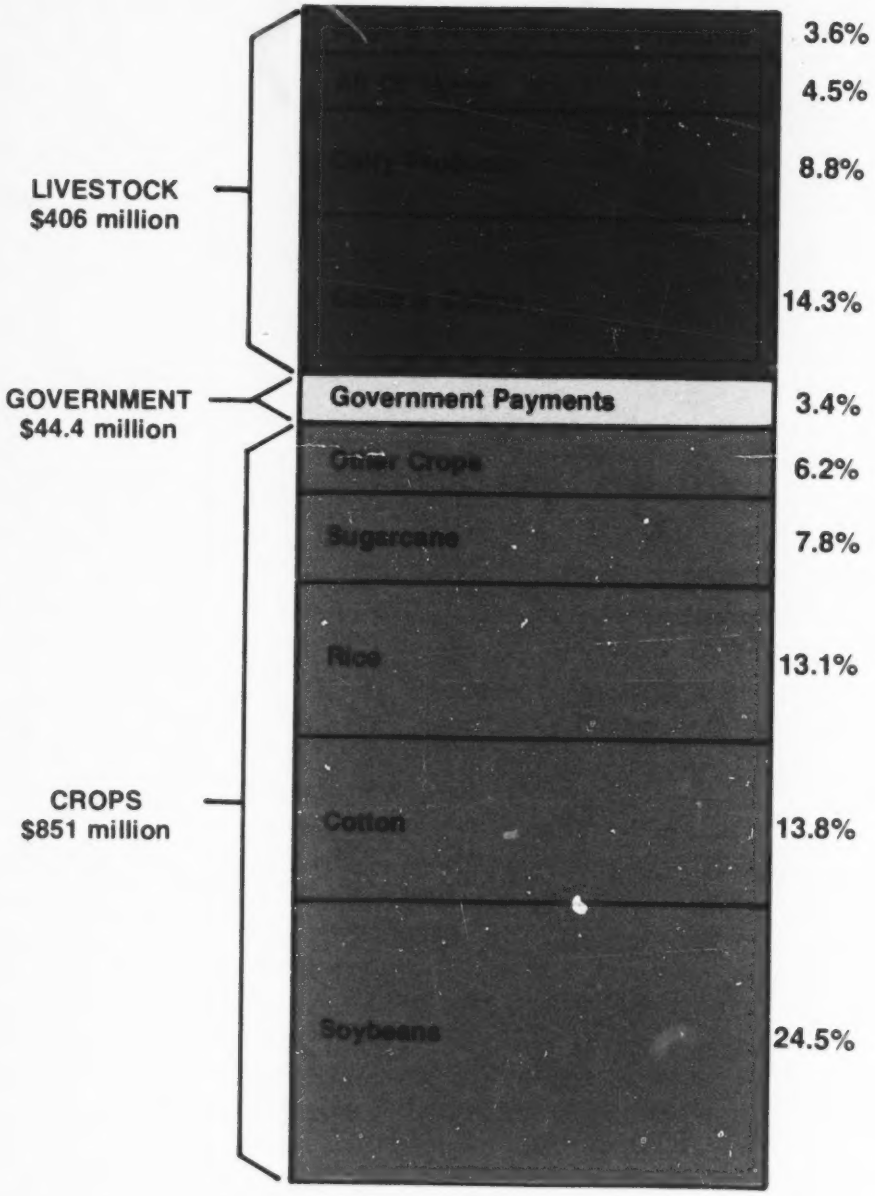
Total "net farm income" (defined as cash receipts plus government payments, plus value of home consumption, plus other farm income, minus farm production expenses, plus or minus net change in farm inventory in 1977) for Louisiana equaled $411.8 million—up $36.8 million from the 1976 figure; net income per farm averaged $9,360 in 1977, compared with $8,334 in 1976 and $7,576 in 1975.

JOBS AND THE LABOR FORCE

In 1977 the number of employed persons in Louisiana equaled 1,459,000, an increase of 113,000 or 8.4 percent over the figure for 1975. Figure 2-3 shows the overall employment trend in Louisiana for the period from 1974 to 1978. Included within the increase of 113,000

FIGURE 2-2

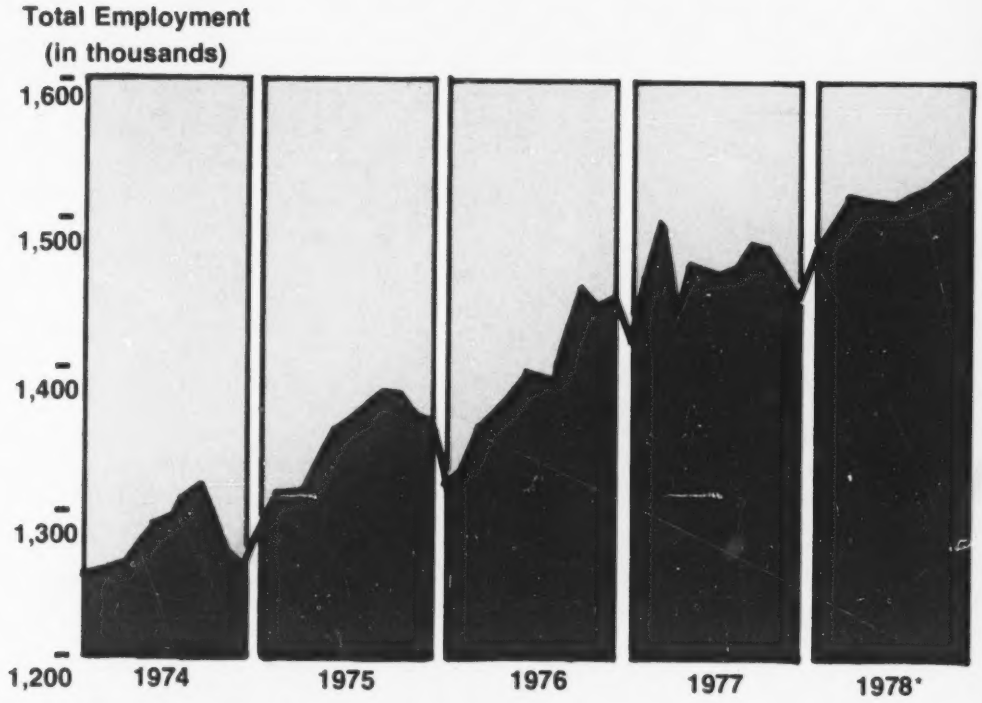
DISTRIBUTION OF LOUISIANA CASH FARM INCOME - 1977



SOURCE: United States Department of Agriculture, Soil Conservation Service, Economics Division.

FIGURE 2-3

LOUISIANA EMPLOYMENT TREND



SOURCE: Louisiana Office of Employment Security.
*Revised data (October 1978 - 1,520,700)
The 1974 through 1977 figures have been benchmarked to the 1977 current population survey-data.

workers in 1977 were 85,000 nonagricultural, wage and salaried employees—an increase of 6.8 percent over the 1975 figure. During the period from 1975 to 1977, the manufacturing sector experienced an employment growth rate of 8.2 percent—i.e., 15,300 jobs were created. Table 2-13 provides data on nonagricultural wage and salary employment in Louisiana for 1977 and 1978. Manufacturing employment in Louisiana exceeded 200,000 for the first time in 1977; nonetheless, based on Louisiana State Planning Office projections, total nonagricultural employment is expected to grow by only 2.3 percent in 1978. Manufacturing employment should increase by 3 percent.

Figure 2-4 provides the 1977 breakdown of employment in Louisiana by major industrial and commercial divisions. The services and miscellaneous sector accounted for 21.6 percent of the nonagricultural work force; retail trade, 20.1 percent; and manufacturing, 17 percent.

TABLE 2-13
LOUISIANA NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY SECTOR, 1977 and 1978
(thousands)

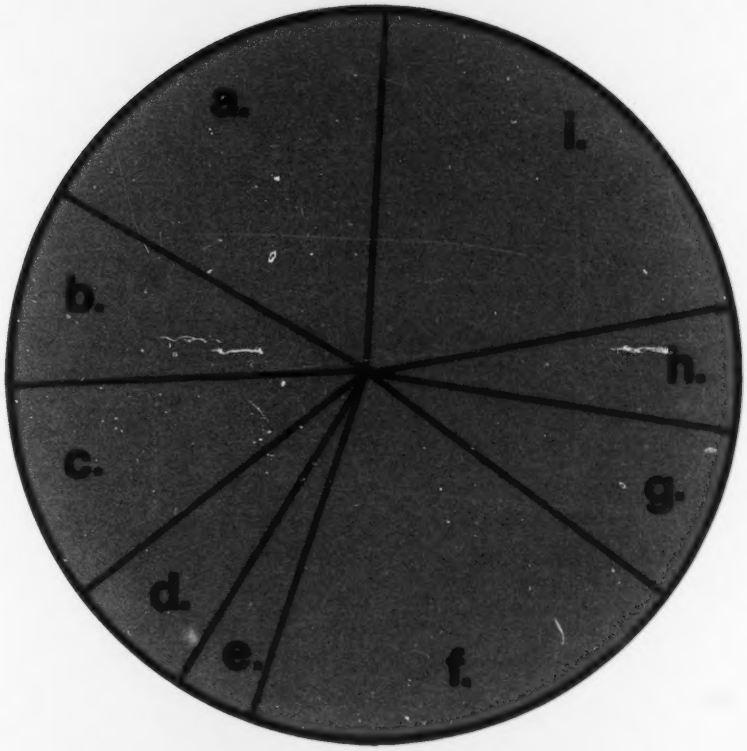
Sector	July 1977*	June 1978*	July 1978†	Net Change July 1977 to July 1978	Net Change June 1978 to July 1978
Nonagricultural Wage and Salaried Workers‡	1,328.2	1,353.4	1,357.8	+29.6	+4.4
Mining and Quarrying	66.2	68.3	68.6	+ 2.4	+0.3
Construction	105.1	103.9	106.4	+ 1.3	+2.5
Manufacturing	203.0	203.7	203.9	+ 0.9	+0.2
Durable Goods	93.9	95.8	96.2	+ 2.3	+0.4
Nondurable Goods	109.1	107.9	107.7	- 1.4	-0.2
Transportation and Public Utilities	102.9	105.7	106.7	+ 3.8	+1.0
Wholesale and Retail Trade	321.3	324.7	325.6	+ 4.3	+0.9
Wholesale Trade	86.3	87.4	87.5	+ 1.2	+0.1
Retail Trade	235.0	237.3	238.1	+ 3.1	+0.8
Finance, Insurance and Real Estate	65.0	67.5	68.0	+ 3.0	+0.5
Services	218.6	228.3	230.3	+11.7	+2.0
Government	246.1	251.3	248.3	+ 2.2	-3.0
Federal	33.5	33.6	33.5	0.0	-0.1
State and Local	212.6	217.7	214.8	+ 2.2	- 2.9

SOURCE: Louisiana Department of Labor, **Louisiana Labor Market,** July 1978.

* Figures for July 1977 and June 1978 are revised.
† Figures for July 1978 are preliminary.
‡ Estimates of nonagricultural wage and salaried workers prepared in cooperation with U.S. Department of Labor, Bureau of Labor Statistics. Includes all full-time workers employed during the pay period including the twelfth of the month.

FIGURE 2-4

PERCENT DISTRIBUTION OF TOTAL EMPLOYMENT IN MAJOR INDUSTRY DIVISIONS 1977



a.	Manufacturing	17.2%	e.	Public Administration	3.5%
b.	Transportation, Communication and Utilities	8.9%	f.	Retail Trade	20.1%
			g.	Wholesale Trade	7.5%
c.	Construction	9.9%	h.	Finance, Insurance and Real Estate	5.5%
d.	Mining	5.8%	i.	Services and Miscellaneous	21.6%

SOURCE: Louisiana Department of Labor, Office of Employment Security.

Average hourly and weekly earnings for manufacturing production workers in the nation, Louisiana and selected states are shown in Table 2-14. Louisiana led the nation and neighboring states in weekly and hourly wages for manufacturing production workers in 1977.

Primary job sources in Louisiana include the mining industry (the production of both fuel and nonfuel minerals), which employs over 65,000 persons, and manufacturing, which employs over 200,000 persons. The outlook for future job growth in manufacturing in Louisiana is excellent; and, importantly, for every job created in manufacturing, approximately four secondary sector jobs result.

COMMUNICATIONS

A modern communications network has contributed to the general growth and development of virtually every sector of the Louisiana economy. While the average citizen comes in contact with this communication system when reading the paper, using the telephone, watching television or listening to the radio, business and industry make use of a markedly more complex system of telecommunications than may be readily apparent.

Telephone Service

South Central Bell and 23 additional independent telephone companies are interconnected to form Louisiana's telephone system. Figure 2-5 depicts the service areas of independent companies and South Central Bell. More than 2.7 million telephones in Louisiana—one for every 1.4 persons—provide service for all areas of the state. Approximately one out of every twenty telephones in Louisiana is serviced by an independent company. The lines and services of the independent companies are coordinated with those of South Central Bell to form an automatic, invisible network. A majority of the independent companies are still home-owned; employees and subscribers, as well as their respective families, are Louisiana taxpayers and voters. The companies contribute appreciably to the state's tax base. Service by independent telephone companies in the state doubled in the years 1968 through 1978; independent company telephones presently in use in Louisiana total 156,457. Independent companies will continue to provide a vital communications service for industries, businesses and residents in rural portions of the state.

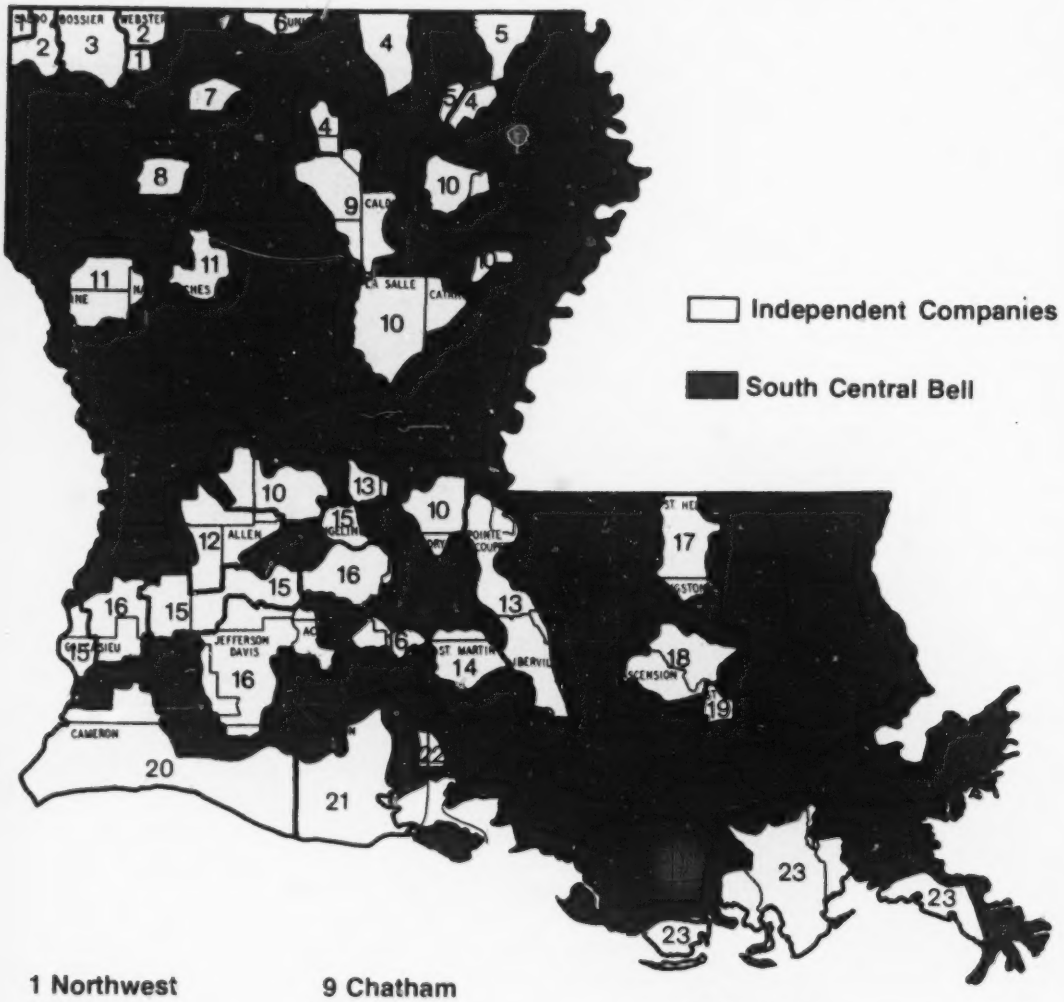
TABLE 2-14
GROSS EARNINGS OF PRODUCTION WORKERS IN MANUFACTURING INDUSTRIES FOR THE UNITED STATES, LOUISIANA AND SELECTED STATES, SELECTED YEARS

State	Average Hourly Earnings				Average Weekly Earnings			
	1965	1970	1975	1977	1965	1970	1975	1977
United States	$2.61	$3.36	$4.81	$5.63	$108	$134	$190	$227
Louisiana	2.55	3.28	4.81	5.75	108	137	198	240
Georgia	2.01	2.67	3.88	4.46	83	106	152	181
Florida	2.16	2.89	4.04	4.63	91	119	160	188
Alabama	2.24	2.90	4.10	4.89	94	117	162	198
Mississippi	1.82	2.43	3.55	4.15	75	98	140	166
Arkansas	1.83	2.48	3.59	4.30	75	99	139	171
Texas	2.48	3.18	4.57	5.42	104	129	186	223

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, **Employment and Earnings,** monthly. Compiled from data supplied by cooperating state agencies.

FIGURE 2-5

AREAS SERVICED BY INDEPENDENT LOUISIANA TELEPHONE COMPANIES AND SOUTH CENTRAL BELL, 1978



1 Northwest	9 Chatham	17 Century
2 Caddoan	10 Central La.	18 East Ascension
3 Plain Dealing	11 Campti - Pleasant Hill	19 Reserve
4 United	12 Elizabeth	20 Cameron
5 Northeast	13 S[illegible]	21 Kaplan
6 Union	14 Coastal	22 Delcambre
7 Athens	15 La. Western	23 Lafourche
8 Ringgold	16 Evangeline	

SOURCE: Louisiana Telephone Association.

Table 2-15 illustrates the scope of telephone services provided by Louisiana telephone companies in 1978. Louisianians make over 18 million local calls every business day. During 1977 more than 1.2 million toll messages originated throughout the state. The total number of telephones in Louisiana increased 69 percent during the period from 1968 to 1978, with residential phones exhibiting the highest growth rate.

Telephone service rates for customers vary based on size of service area, number of stations, and type of service provided (business or residential). Louisiana continues to provide its residents with the nation's lowest pay station call rates, with the nickel call rate still available in many nonurban areas serviced by independent companies.

TABLE 2-15
SCOPE OF SERVICES OF LOUISIANA TELEPHONES
DECEMBER 1978

Total telephones	2,719,893
South Central Bell telephones	2,563,436
Independent company telephones	156,457
Total main stations	1,456,003
Total toll messages	1,271,357*
Number of local calls originating per average business day	18,338,196

SOURCE: South Central Bell.

* Number of toll messages during the period from January 1, 1978 through December 31, 1978.

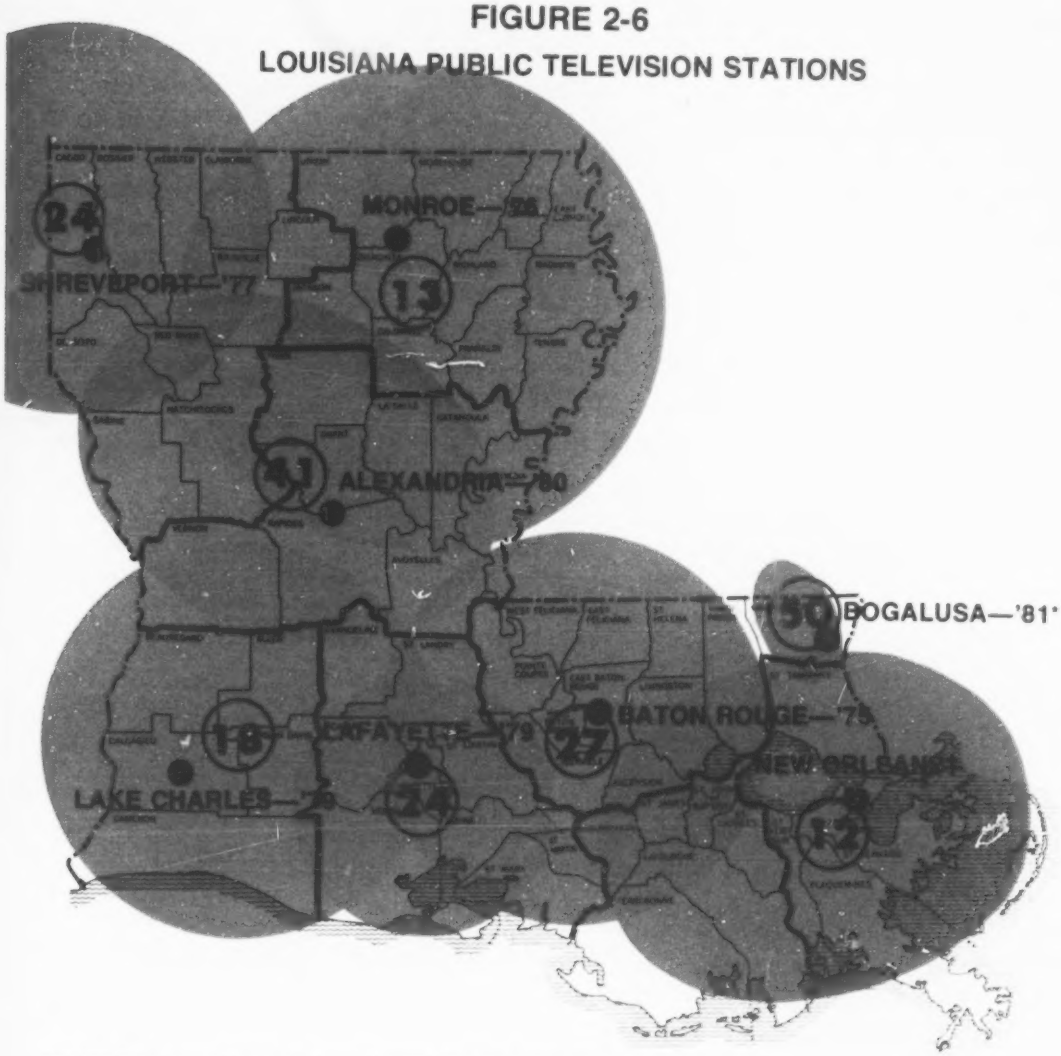
Public Television

Television, considered the most influential medium of communication, has almost unlimited potential as a method of education and fast, wide-coverage communication. Television's potential continues to be enhanced by advancements in electronics. Public television first came to Louisiana in 1957 with the opening of WYES, Channel 12 in New Orleans. The Louisiana Educational Television Authority (LETA), organized in 1971, established as a goal for 1981 a statewide network of eight public television stations. Three LETA stations are currently in operation—Baton Rouge's WLPB, Monroe's KLTM, and

Shreveport's KLTS—and community-owned WYES in New Orleans is integrated into the LETA network. Four more stations are scheduled for future construction in Alexandria, Bogalusa, Lafayette and Lake Charles. Figure 2-6 shows the location of existing and proposed public television stations in Louisiana.

FIGURE 2-6

LOUISIANA PUBLIC TELEVISION STATIONS



SOURCE: Louisiana Educational Television Authority.

*Translator station

†Community-owned, tied into LETA network.

Note: Year indicates date of implementation.

Public television proffers the potential for expanded educational programming for classrooms of every school in the state; moreover, it provides an important public service for all Louisiana residents. Rapidly gaining acceptance with persons of all age groups and socioeconomic levels, public television has expanded programming beyond the traditional educational format; it now constitutes a full service medium providing public information, entertainment and presentations of the arts. As more people have become aware of the quality of both subject matter and productions, public television's audience has increased. The Neilson Station Index reveals that public television was viewed at least once a week in 23,529,000 households nationwide in February 1979—an increase of 2.6 percent over the figure for February 1978. The Neilson report indicates that LETA's flagship station, WLPB, Channel 27 (Baton Rouge), was watched at least once a week in one out of three households in the Baton Rouge viewing area during February 1979. In New Orleans, where public television has been offered for a longer time, the public television station affiliate, Channel 12, was watched at least once a week by 40 percent of the total households in the viewing area.

A recent survey conducted by LETA provides data on the utilization of educational programming offered by public television: in 1978, 3,663 teachers in 59 of the 66 school systems in Louisiana used instructional television from one to three times a week; television instruction reached 98,000 elementary and secondary school students—12 percent of total state enrollment in 1978.

In 19 viewing areas throughout the state, the Louisiana Educational Television Network offers a health education program designed to continue the education of paramedics, physicians and medical service administrators in Louisiana's public and private health institutions.

Commercial Television, Radio, Newspapers and Periodicals

Commercial television operations in Louisiana began in December 1948 with the opening of WDSU, Channel 6 (an NBC affiliate) in New Orleans. Louisiana now has sixteen privately owned television stations that provide major network coverage and independent programming for households throughout the state. Additional television coverage is available in selected cities through cablevision, which offers more channels than are available locally. Commercial television programming includes entertainment, syndicated news bureau

broadcasts, local news coverage and public service notices and projects. In addition, commercial television serves as the principal advertising medium for many business enterprises.

Because radio reaches more people than any other form of mass communication, it constitutes a primary source of news and public information, as well as an exceptional advertising medium. The number of radio stations in Louisiana (both AM and FM) increased dramatically during the period from 1965 through 1978: in 1965 Louisiana had 96 stations—86 AM stations and 10 FM stations; in 1978 the state had 170 stations—96 AM stations and 74 FM stations. Table 2-16 reveals the total number of radio and commercial television stations in Louisiana for the years 1965 through 1978.

The total number of daily newspapers in Louisiana has remained relatively stable during the last 25 years in spite of the continually increasing popularity of radio and television as media of communication. With the exception of the evening editions, Louisiana daily

TABLE 2-16
LOUISIANA COMMERCIAL STATIONS, 1965-1978

Year	Total	AM	FM	TV
1965	108	86	10	12
1966	116	86	18	12
1967	127	88	27	12
1968	133	88	31	14
1969	140	89	36	15
1970	146	90	41	15
1971	148	90	43	15
1972	152	91	45	16
1973	156	92	48	16
1974	154	92	45	17
1975	162	93	52	17
1976	165	94	55	16
1977	180	94	70	16
1978	186	96	74	16

SOURCE: U.S. Department of Commerce, Bureau of the Census, **Statistical Abstract of the United States; Broadcasting Yearbook.**

newspapers experienced moderate, steady growth in paid circulation during the period from 1954 through 1978. Data on the number and paid circulation of daily newspapers in selected years are shown in Table 2-17.

In addition to the 24 major dailies, approximately 100 weekly and semiweekly newspapers and 55 magazines and periodicals (distributed weekly, monthly or quarterly) are published in Louisiana. In all, there are 99 Louisiana towns in which either a newspaper, magazine or other media publication originates.

TABLE 2-17
NUMBER AND CIRCULATION OF LOUISIANA DAILY NEWSPAPERS, SELECTED YEARS

	Morning		Evening	
Year	Number	Net Paid Circulation	Number	Net Paid Circulation
1954	5	370,000	16	375,000
1960	4	351,000	14	382,000
1970	4	377,000	19	394,000
1975	5	400,000	21	424,000
1978	4	402,812	20	420,182

	Sunday		Total	
Year	Number	Net Paid Circulation	Number	Net Paid Circulation
1954	11	632,000	21	745,000
1960	8	592,000	18	732,000
1970	10	671,000	23	771,000
1975	14	751,000	26	824,000
1978	15	780,000	24	822,994

SOURCE: U.S. Department of Commerce, Bureau of the Census, **Statistical Abstract of the United States; Ayer Directory of Publications, 1978.**

CONCLUSION

Louisiana has established an infrastructure of commerce that provides a stable economy, a relatively high level of personal income, diverse and plentiful business opportunities and a strong state revenue base. The commercial strength of the state today affords a solid foundation for the future prosperity of Louisiana citizens.

Chapter 3

The strength of the United States economy is based upon the most extensive and best integrated transportation system in the world. Louisiana's modern highways, waterways, railroads and aviation facilities form an integral part of this system. The benefits derived from the Louisiana transportation system reach every citizen of the state by providing productive livelihoods and more varied leisure time activities.

HIGHWAYS

The public roads system is a daily feature in the personal and commercial transportation of most Louisiana citizens. Of the total 55,000 miles of public roads in the state, over 16,000 miles are state-maintained; all other road mileage is maintained by parish or local authorities. State-maintained roads are located along more important transportation corridors in Louisiana and, consequently, carry the bulk of the traffic. State highways are listed by functional category in Table 3-1.

To sustain and improve the highway transportation system, the Office of Highways (Louisiana Department of Transportation and Development) continually studies transportation requirements, traffic patterns and existing highway conditions. This analysis results in annual "needs" summaries, which indicate improvements required for continued good functioning of the highway system. The summaries classify needs into two time periods—the present and the next five years. For the present period (1977-1978), improvements totaling 2,546 miles are required at an estimated cost of $873,166,000. Within five years an additional 6,677 miles of improvements costing $1,154,698,000 will be needed.

TABLE 3-1
HIGHWAY FUNCTIONAL CLASSIFICATION SUMMARY, 1978

Classification	Miles	Percent Total
Rural Arterial*	3,248	19.9
Rural Collector	11,897	73.0
Urban Arterial*	1,087	6.7
Urban Collector	75	0.4
Total	**16,307**	**100.0**

SOURCE: Louisiana Department of Transportation and Development, Office of Highways.

* Includes Interstate in respective areas.

Interstate Highways

Interstate highways allow rapid transportation both cross-country and within urban areas. In Louisiana 75 percent of the Interstate system has been completed; only 217 miles of a total system mileage of 865 miles remain to be constructed. This total includes the newly designated I-49, which is designed to provide better connection between north and south Louisiana. A section of Interstate scheduled for construction in eastern Orleans Parish consists of a spur route linking I-10 to the Mississippi River-Gulf Intracoastal Waterway Bridge. All Interstate construction qualifies for 90 percent federal funding.

U.S. 90

Another major ongoing highway project in Louisiana is the upgrading and relocation of U.S. 90. This project is designed to provide safe and convenient access between New Orleans and south central Louisiana. Much of the improvement has already been constructed. The remaining section between Raceland and Morgan City is now undergoing careful planning to avoid damaging wetland areas which it must traverse. Completion of this section will provide an uninterrupted four-lane limited access highway from Lafayette to the New Orleans area.

Weight Enforcement

Highways are engineered to take a great deal of wear and tear from pounding wheels. However, the stresses for which roads are designed can be exceeded. In order to reduce the major cause of unnecessary road wear, overweight trucks, the Department of Transportation and Development has taken a strong stance against violators of state laws regulating truck weights. The weight enforcement section of the Office of Highways maintains eleven weighing stations on major traffic arteries of the state. Additionally, mobile units have been established to apprehend violators who avoid weighing stations. From July 1977 through June 1978, over three million truck weighings were taken, with only 7,599 violations recorded. The mobile units have had a major impact on weight violations: the number of apprehensions has nearly tripled. Weight enforcement saves millions of dollars in road repair costs and, therefore, pays for itself many times over.

RAILROADS

Railroads as a fuel-efficient transportation mode have garnered greater interest among transportation planners in recent years. Louisiana's 3,752 miles of track are located in 62 of the state's 64 parishes—St. Helena and Cameron parishes have none (Figure 3-1). Freight tonnage has increased on Louisiana lines in recent years: an overall increase of 11.75 percent in tonnage originating and/or terminating in the state occurred in the years 1969 through 1976. Table 3-2 indicates the mix of commodities transported on rail lines in Louisiana. Clearly, rail transport is an important support function for several of the state's major industries.

Companies operating railroads have experienced financial difficulties in recent years, in part because of high labor costs and increased competition from other transportation modes. As a result, railway companies have sought to abandon unprofitable lines. The federal government regulates line abandonment so that abandonment is allowed only when required or permitted by present or future public convenience. During the years 1977 and 1978, 179.4 miles of track were abandoned in Louisiana. Applications for abandonment have been filed for an additional 74.5 miles (Table 3-3). The Louisiana Department of Transportation and Development has undertaken negotiations to save two lines: the Rio-Lexie (Washington Parish) and the Slidell-Covington (St. Tammany Parish).

TABLE 3-2
MAJOR COMMODITIES TRANSPORTED ON LOUISIANA RAIL LINES, 1976

Commodity	Percentage of Total Tonnage Originating	Terminating
Chemicals and Allied Products	37.7	11.7
Lumber and Wood Products	17.3	22.2
Petroleum and Coal Products	10.0	5.6
Food and Kindred Products	9.4	10.5
Paper, Pulp and Allied Products	8.5	3.0
Farm Products	1.7	18.6
Stone, Clay and Glass Products	1.5	7.9
Nonmetallic Minerals (Except Fuels)	2.3	7.2

SOURCE: Louisiana Department of Transportation and Development, **Louisiana State Rail Plan**, 1979.

TABLE 3-3
RAIL LINES FOR WHICH ABANDONMENT APPLICATIONS ARE PENDING

Termini	Mileage
Rio-Lexie	37.2
Slidell-Covington	31.0
Oaklawn-Franklin	6.3

SOURCE: Louisiana Department of Transportation and Development.

FIGURE 3-1

LOUISIANA RAILROADS, 1978

SOURCE: Louisiana Department of Transportation and Development, **Louisiana State Rail Plan,** 1979

WATERWAYS AND PORTS

The waterways of Louisiana have played a dramatic role in the development of the state. In Louisiana's early history rivers, bayous and lakes constituted the only transportation system. Although modern highways, airlines and railroads have superceded the water transportation system, water transport remains extremely important to the economic well-being of the state.

Waterways

To a great extent water transport is dependent upon natural water features. The presence of the Mississippi is undoubtedly the most important single factor in the vitality of waterborne traffic in Louisiana. This great river provides a highway to the center of the nation and enables seagoing vessels to ascend as far inland as Baton Rouge. The 9,000 mile total length of navigable waterways of the Mississippi and its tributaries allows port development as far north as Minneapolis-St. Paul and as far east as Pittsburgh. This system creates a vast hinterland for Louisiana's Mississippi River ports—the points at which transshipment from barges to ships occurs. Many other natural streams in the state provide additional routes for commerce, most of which are of local significance only. The outstanding exception is the Calcasieu River, which is navigable to ships up to Lake Charles, a port heavily engaged in international trade. The state's natural water features are complemented by man-made waterways. While the major natural water features of Louisiana exhibit a north-south trend, the Gulf-Intracoastal Waterway (GIWW)—the state's major man-made artery of water commerce—runs east-west. GIWW augments the ports of Louisiana by providing a multi-directional component for cargo movement.

A major expansion of the Louisiana waterway system is currently underway. The U.S. Army Corps of Engineers is modifying the channel of the Red River to provide a minimum navigation depth of 9 feet from the mouth of the river to the city of Shreveport. This improvement will both stimulate the growth of the ports at Shreveport and Alexandria and provide an economic boost to all of north Louisiana.

Ports

A result of the excellent waterway system in the state has been the development of major ports. New Orleans, the third largest port in the world after Rotterdam and New York, handled nearly 163 million short tons of cargo in 1977. Over 40 percent of this tonnage was hydrocarbon fuels and related materials. Grains and soybeans are also major components of New Orleans' port tonnage. International trade generates almost 40 percent of the total yearly tonnage of the port.

With a 1977 tonnage greater than 70 million short tons, the Port of Baton Rouge is the fourth largest port in the United States. While hydrocarbon fuels and related materials comprise over 42 percent of the port's cargo weight, grains, chemicals and aluminum ores are

also important. This cargo profile reflects the area's major economic components. Thirty-six percent of the Baton Rouge port tonnage is international in origin or destination.

Hydrocarbon fuels, chemicals, rice and lumber are the major commodities of the state's third largest port, Lake Charles. The port handled over 25 million short tons of cargo in 1977. (A breakdown of tonnage by origin/destination type is provided for each of the state's three major ports in Table 3-4.)

Louisiana's major ports have experienced healthy growth in recent years. The Baton Rouge port has grown the most rapidly, logging a 54 percent increase in tonnage from 1970 through 1977. During this period the New Orleans and Lake Charles ports grew by 32 percent and 44 percent, respectively. Because water transport is fuel efficient compared with other transportation modes, continuing fuel price increases will probably encourage greater use of ports and port facilities.

The Louisiana Superport, located 19 miles from the Lafourche Parish shore, will add a new dimension to waterborne commerce in Louisiana. The offshore, deepwater location will allow large tankers now used in international oil trade to moor and offload via pipeline to salt-dome storage facilities on land. The oil will then be piped to refining facilities located along the Mississippi. The first phase of construction, scheduled for completion in early 1981, has a planned capacity of 1.4 million barrels per day. Later phases should add another 2 million barrels per day capacity.

AVIATION

Aviation is an increasingly important component of Louisiana's total transportation network. General aviation services, now convenient to most areas of the state, provide a rapid transportation mode vital to the functioning of the public and private economic sectors of the state (Figure 3-2). Of the existing 291 landing facilities (five completed in 1978), 119 are available for public use, while 172 are designated "restricted" airports (Table 3-5).

Louisiana's seven major airports, located within or around the state's largest cities, meet the needs of the traveling public and accommodate the state's growing tourist trade. Demand for scheduled passenger air service in Louisiana has increased markedly: between 1970 and 1978 passenger enplanements increased 40 percent (Figure 3-3). During 1978 alone, nearly 4.1 million passengers took advantage

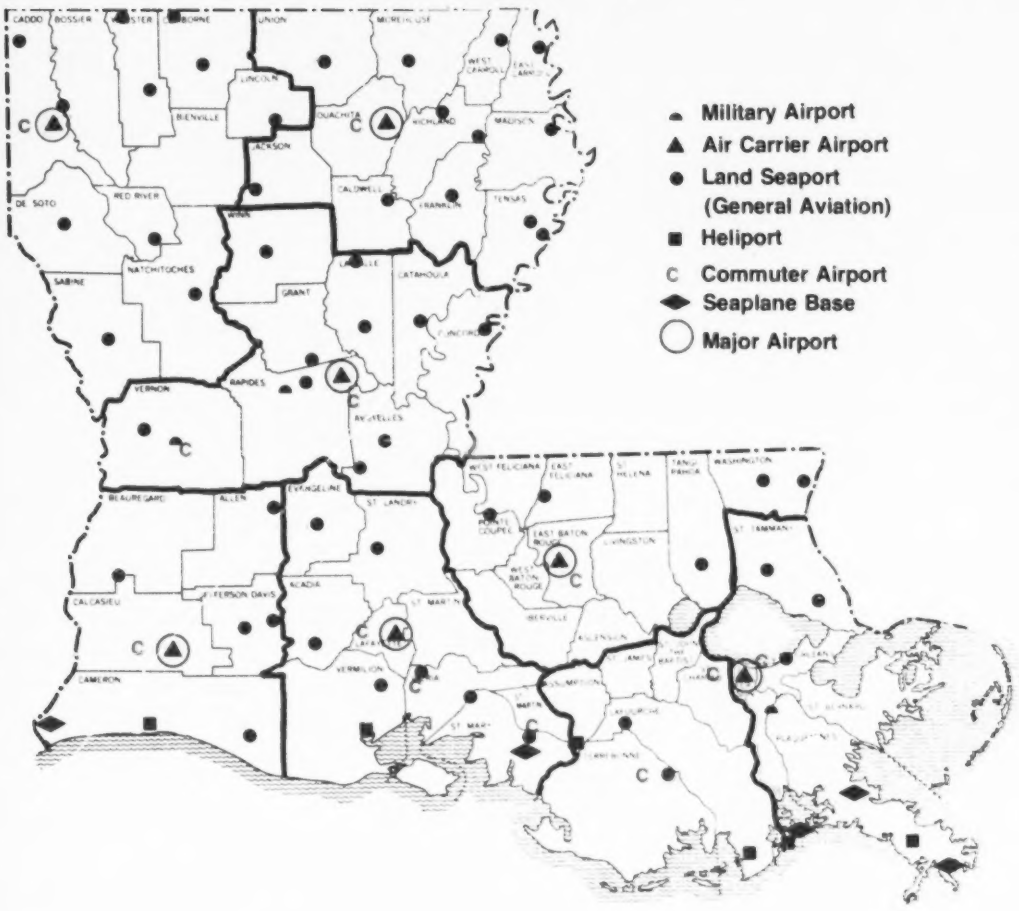
TABLE 3-4
COMMERCE OF LOUISIANA OCEAN PORTS, 1977
(short tons)

Commerce	Port of New Orleans 1977	Port of Baton Rouge 1977	Port of Lake Charles 1977
Grand Total	162,991,985	70,008,229	25,401,265
Foreign			
Imports	25,213,560	16,826,390	8,129,768
Exports	39,073,593	8,678,794	1,530,207
Domestic Coastwise			
Receipts	2,802,471	3,073,540	206,244
Shipments	12,857,124	6,060,183	3,917,374
Domestic Internal			
Receipts	55,547,267	13,664,043	7,810,304
Shipments	22,945,856	20,935,344	3,263,075
Domestic Local	4,552,114	769,935	544,293

SOURCE: Department of the Army, Corps of Engineers, **Waterborne Commerce of the United States, Part II—Gulf Coast, Mississippi River System, and Antilles**.

FIGURE 3-2

EXISTING AIRPORT SYSTEM, 1978



SOURCE: Louisiana Department of Transportation and Development, Office of Aviation.

of scheduled flights provided by 16 FAA certified commercial carriers. Airports at Baton Rouge, Lafayette and Lake Charles have experienced the highest growth rates in the number of enplaned passengers since 1974 (Table 3-6). From Moisant International Airport (New Orleans), passengers can fly direct to many domestic and foreign destinations, including (via flights instituted in 1978) Alaska, Puerto Rico, Venezuela, England and Mexico.

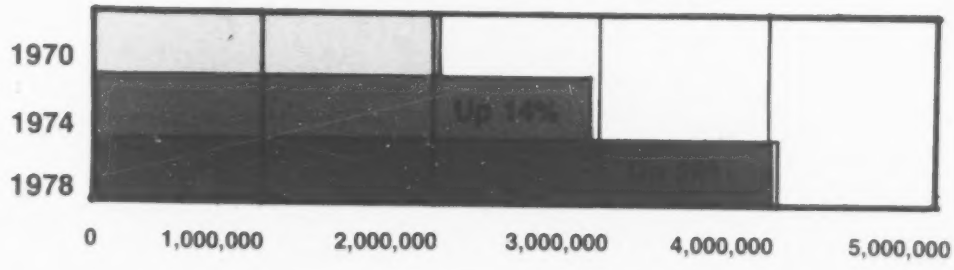
TABLE 3-5
EXISTING LANDING FACILITIES IN LOUISIANA, 1978

Facility	Number	Open to Public		Not Open to Public	
		Publicly Owned	Privately Owned	Publicly Owned	Privately Owned
Airports	187	65	37	1	84
Heliports	85	1	4	2	78
Seaplane Bases	19	3	9	1	6
Total	**291**	**69**	**50**	**4**	**168**

SOURCE: Louisiana Department of Transportation and Development, Office of Aviation.

FIGURE 3-3

ENPLANEMENT TRENDS IN LOUISIANA AIR CARRIER TRANSPORTATION



SOURCE: Louisiana State Planning Office based on data from the Louisiana Department of Transportation and Development, Office of Aviation, January 1977; **Executive Summary: Louisiana State Airport System Plan,** July 1976; Selected Airport Commissions in Louisiana, July 1979.

TABLE 3-6
PASSENGER ENPLANEMENTS FOR LOUISIANA'S HUB AIRPORTS

Airport	1974	1978	Volume Increase	Percent Increase
New Orleans	2,224,000	3,004,000	780,000	26
Baton Rouge	153,000	253,000	100,000	40
Shreveport	356,000	440,000	84,000	19
Alexandria	62,000	79,000	17,000	22
Lake Charles	38,000	55,000	17,000	31
Monroe	91,000	122,000	31,000	26
Lafayette	75,000	117,000	42,000	36
Total	**2,999,000**	**4,070,000**	**1,071,000**	**26**

SOURCE: Louisiana State Planning Office, based on Louisiana Department of Transportation and Development, Office of Aviation, **Executive Summary: Louisiana State Airport System Plan,** July 1976; interviews with staffs of selected airport commissions, January 1979.

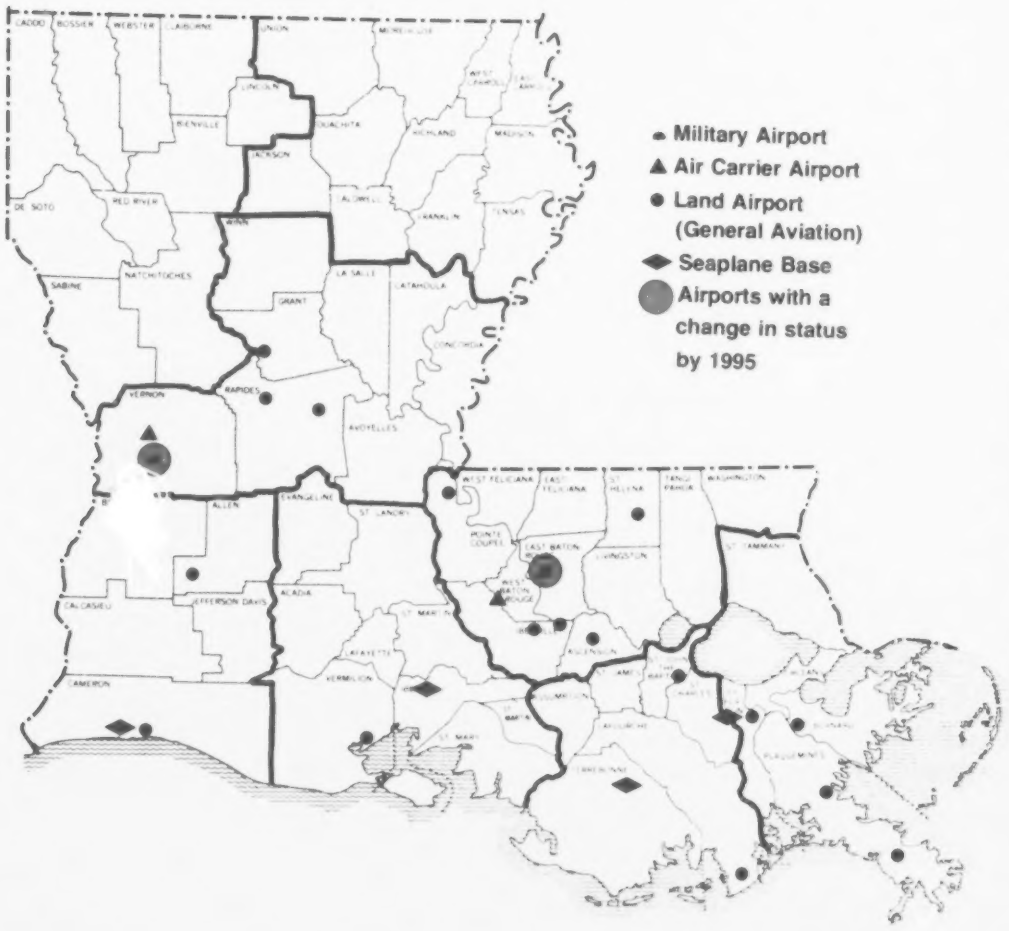
The state's major population centers benefit from services of large commercial airlines; smaller communities must rely upon commuter carriers for air travel. Since 1975 when the Louisiana Legislature created the Intrastate Air Carrier Board, designed to oversee the state's commuter system, the state has encouraged carriers to improve their scheduled service. The three major commuter airlines operating in Louisiana in 1978, Royale, Universal and Charlie Hammond, provided service to landing strips at the Lakefront Airport (New Orleans), New Iberia, Houma, Patterson and Leesville-Fort Polk, in addition to the state's seven major airports.

Responding to increased demands for air service, the State of Louisiana, through the Department of Transportation and Development, Office of Aviation, has undertaken an aggressive program to upgrade publicly owned airports throughout the state. During Fiscal Year 1977-1978 the federal government allocated $16.6 million to Louisiana airports. This amount was matched by more than $3.1 million state dollars. An additional $13.5 million in federal funds is anticipated for Fiscal Year 1978-1979. These funds are directed toward the provision of adequate markings on runways and taxiways, new and improved drainage facilities, and required navigational aids for all publicly owned airports in Louisiana.

Based on current trends, future demand for air passenger service will require the continued upgrading of Louisiana's existing airports and the provision of additional facilities in many areas of the state. The **Louisiana State Airport System Plan,** completed in July 1976, indicates alterations and additions that may be required by 1995 (Figure 3-4). The plan suggests the construction of new airports in many areas of the state. This will provide the first in-parish service for St.

FIGURE 3-4

RECOMMENDED AIRPORT SYSTEM BY 1995



SOURCE: Louisiana Department of Transportation and Development, Office of Aviation.

Helena, Ascension, St. John, Iberville and St. Bernard parishes. If, as the plan advises, new regional airports are constructed in Vernon and Iberville parishes, existing facilities at Fort Polk and Baton Rouge will be downgraded.

Because aviation provides rapid transportation requisite for a modern economy, it is imperative that Louisiana continue to improve the quality and availability of air service in the state.

CONCLUSION

Louisiana's well-developed transportation system has encouraged the economic growth of the state. Further growth—perhaps even maintenance of the status quo—will require continual improvement of the state's transportation components through careful planning of all transportation projects. An up-to-date transportation system can ensure a bright economic future for Louisiana.

Natural Resources and Energy

Chapter 4

Louisiana is richly blessed with natural resources. Fertile soils, abundant water, mineral deposits locked in deeply buried strata, productive fisheries and teeming wildlife comprise the foundation of Louisiana's economy, the source of livelihood for the state's citizens.

An appreciation of the value of these natural resources is growing. Louisiana citizens are learning that resources can no longer be merely exploited; rather, they must be managed to continue to provide sustenance as well as an enhanced quality of life for this and following generations.

LAND RESOURCES

The land surface is a versatile natural resource; the uses made of land resources devolve from the nature of the lands as well as from society's needs and technology. Land use in a state reflects the character of that state's economy. In Louisiana, a diverse economy is paralleled by a diversity of land uses.

The relationship between land use and economic factors is evident in Louisiana's most extensive land use categories—forests, agricultural lands and coastal wetlands.

Forests

According to the latest forest survey (1974), Louisiana has 14.5 million acres of forest land—roughly 50 percent of the state's land surface. A decline in forested acreage of about 1.5 million acres has occurred since 1964 largely because of conversion to agricultural,

residential and transportation uses. Nonetheless, existing forests in Louisiana are growing 55 percent more timber than is being harvested annually.

The predominant species of Louisiana forests are concentrated in different parts of the state. The pine lands are in the northwest, where loblolly and shortleaf are the primary species; in certain areas of the southwest, where planted slash and loblolly predominate; and in the southeast, where loblolly, slash and remnants of longleaf are found. A 30- to 50-mile-wide belt of hardwood lands extends the length of the Mississippi and on into the Atchafalaya River Basin. In this belt oaks, sweetgum, ash, hickories, elms and cottonwood are located on higher land, with cypress and tupelo gums in the swamps.

Ownership of Louisiana forests is widely distributed among many individuals and organizations. A common belief is that government or industry owns most forest lands, and in some states this is true. In Louisiana, however, 67 percent, or 9.7 million acres, of the forest land is owned by the private, nonindustrial owner; 26 percent, or 3.7 million acres, is owned by forest industries; and the remaining seven percent, or slightly more than one million acres, is public land—over half of which is within national forests.

Most large-scale private and industrial landowners wisely manage their timberlands on a continuing basis, but many individuals owning 500 acres or less have been quite slow in adopting techniques to increase the productivity of their forest lands. Generally, the smaller the size of the ownership, the greater the probability of a need for improved forest management.

An estimated three million acres of Louisiana forest land today are idle and will require planting to achieve satisfactory productivity. Another 8.5 million acres, though forested, need intensified management. Nonetheless, Louisiana's forest lands have proven to be a financial boon to their owners and to the overall state economy.

In 1977 forest owners received more than $163 million in payments for wood harvested from their lands, and the value added by harvesting, manufacturing and marketing of finished products boosted the total economic impact of Louisiana forestry to $3.6 billion, according to figures published by the Louisiana Department of Agriculture. This figure is equivalent to more than half of the total impact of all Louisiana agricultural and farm products combined.

Some 200 primary wood-products mills and plants operate in Louisiana. These industries comprise the largest manufacturing

employment sector in the state, utilizing approximately 31,000 individuals (18 percent of the total available manufacturing work force) and providing an annual payroll of $302 million. An additional $137 million is paid to the wood suppliers.

Primary wood-using plants in Louisiana include 14 pulp and paper mills, 18 pine plywood plants, 34 pole and piling treating plants, and 78 permanent sawmills.

During the period from 1964 to 1974, forest industries made capital investments of $640 million in new Louisiana pulp and paper mills, sawmills, plywood plants and other facilities. But during 1977 and the first half of 1978 alone, industry made additional capital investments of $330 million. During the 1964 to 1974 period, the state jumped in ranking from tenth to third in the South in pulp manufacturing. Furthermore, during that same ten-year span Louisiana moved to third place nationally in production of softwood plywood, a product and an industry unknown in the state only a few years ago. Louisiana is the nation's leading producer of particle and insulating board.

Wood products industries use numerous tree species as raw products. The backbone species of the industry in Louisiana and throughout the South, however, are the southern pines: loblolly, shortleaf, slash and longleaf. Primary characteristics that contribute to the high-use value of southern pines are rapid growth, exceptional adaptability to diverse sites and soil conditions, unusual versatility and strength, and reasonable market prices.

In spite of high production rates, Louisiana's forests face several serious problems—wildfires, poor management and conversion of forest land to other uses. For a number of years southern forests have been subjected to countless wildfires. While few "headline" fires such as those prevalent in the West have occurred, thousands of smaller fires severely damage southern forests annually. During the period from 1974 to 1978, Louisiana averaged 5,500 fires annually, which consumed nearly 74,000 acres each year. Virtually all wildfires in Louisiana are caused by people. Disturbingly, over 80 percent are purposely set. Table 4-1 provides detailed information on forest fires by cause and number of acres burned.

The task of persuading independent, nonindustrial landowners to manage their woodlands for maximum production is a serious problem. Louisiana has 114,000 independent owners who control 67 percent of the state's total forest land. Nationwide, independently owned lands are producing less than half of their capacity. With both

TABLE 4-1
FIRE CAUSES
FIVE-YEAR ANNUAL AVERAGE, 1974-1978

Cause	Number of Fires by Cause	Number of Acres Burned	Percent of Acres Burned*
Lightning	16	192	0.3
Camping	39	277	0.4
Smoking	288	1,735	2.3
Brush Burning	773	9,840	13.3
Incendiary	5,195	60,299	81.6
Machine Use	42	329	0.4
Railroad	64	763	1.0
Children	20	75	0.1
Miscellaneous	58	347	0.5
Total	**6,495**	**73,857**	**99.9**

SOURCE: Louisiana Department of Natural Resources, Office of Forestry.

* Does not total 100 percent due to rounding.

the long-term investment involved and the risks from wildfires, insects, diseases and other factors, convincing the independent owner to invest his time and money in timber is an extremely difficult task.

Another major problem confronting Louisiana forestry is the continuing conversion of forest land to alternate uses. From 1964 to 1974, 38 percent of the woodlands in the state's north delta (northeast) were cleared, principally for soybean production. Statewide, the decline of forest acreage was nine percent. Almost 600,000 acres of pines were lost to agriculture and urbanization. Hardwood clearing will probably continue simply because forests cannot produce the high monetary returns associated with soybean production. Unfortunately, in many areas the land being cleared, while excellent for hardwood production, is extremely marginal for farming due to the high likelihood of flooding.

Urbanization also threatens Louisiana's forests. Much of the privately owned forest land in the state is located in 26 rapidly growing parishes. Fourteen of these parishes have significant areas of

pine timber; the other 12 parishes, most of which are in the Atchafalaya Basin, have primarily bottomland hardwoods. In particular, the New Orleans-Baton Rouge-Hammond metropolitan growth is consuming forest lands in adjacent areas.

Careful study, planning and governmental action addressing the problems facing Louisiana's forest resources can help to ensure the future of forestry production. Certainly, Louisiana's forests will become more valuable with time in an increasingly timber-hungry world.

Agricultural Lands

Agriculture is one of the most extensive uses of land in Louisiana. Correspondingly, it plays a major role in the state's economy. The farm sale value of agricultural commodities produced on fewer than 5 million acres in Louisiana in 1977 exceeded $1.25 billion. This figure when multiplied by the income derived from the processing, packaging, storing, shipping and merchandising of farm products contributed an even larger share to the economy. Present trends indicate that agriculture will continue to be a major element of the economic life of Louisiana.

Unlike many large industries, agriculture can generate a recurring return of income without depleting its basic production resources, soil and water. In order for Louisiana farmers to meet anticipated domestic and world food and fiber needs, good land management practices must be continued and expanded. During the past forty years agricultural land management practices have been established in Louisiana through the efforts of the U.S. Department of Agriculture, Soil Conservation Service; local soil and water conservation districts; researchers at state universitities; and farmers and other land users.

The 1977 Federal Resources Conservation Act (Public Law 92-195) requires a review of federally sponsored conservation programs in each of the fifty states. Included within the review process was a survey of public opinion which found four frequently mentioned concerns in Louisiana: retaining prime agricultural lands for food and fiber production, controlling erosion, improving drainage and enhancing water quality. Another aspect of the review revealed that 4.7 million agricultural acres require conservation treatment and 5 million acres need erosion control measures. Over the next five years an estimated $300 million must be expended to maintain the present level of production on Louisiana's croplands. This figure includes

projected costs for preventing conversion of agricultural lands to other uses and for providing general land maintenance. Correction of all erosion problems in the state would require $400 million. Adequate drainage provision and water pollution abatement costs would exceed $1.2 billion. Table 4-2 indicates acres of land requiring conservation treatment for erosion control and water quality enhancement by parish; a close correlation is evident among agricultural activity, land resource area and acreage requiring conservation treatment.

The Sloping Coastal Plain resource areas have the highest percentage of agricultural land requiring treatment. However, the greatest total acreages needing treatment are within those parishes with extensive row crop production—the Nearly Level Coastal Plain parishes in the southwest and those parishes within the Alluvial Plain of the Red, Ouachita and Mississippi rivers. Many of the nearly level crop producing areas requiring conservation treatment to control soil erosion also need surface drainage systems for optimum crop yields.

Without question, the agricultural lands of Louisiana will need considerable attention if continued high yields and satisfactory water quality are to be maintained. The implementation of conservation techniques must be pursued with increased vigor to sustain this vital sector of the Louisiana economy.

Coastal Wetlands

The coastal wetlands are an especially valuable landform for Louisiana—with their vast expanse unparalleled in the forty-eight continental states. In 1978 the Louisiana Legislature gave special recognition to the wetlands by creating a coastal zone management area which extends through 17 of the state's parishes (Figure 4-1).

The coastal wetlands, comprised of grassy marshes and wooded swamps usually inundated during part of the year, constitute a valuable ecosystem yielding vital benefits for Louisiana, the nation and the world. The Louisiana Department of Wildlife and Fisheries estimates that 98 percent of the state's commercial fisheries production is dependent upon the wetlands. (Louisiana coastal waters are one of the most bountiful fisheries in the world.) The relationship between fisheries production and wetland acreage is shown in Figure 4-2. These areas also serve as habitat for many migratory birds and other wildlife and provide outdoorsmen with unsurpassed esthetic and recreational opportunities.

TABLE 4-2

AGRICULTURAL LAND REQUIRING CONSERVATION TREATMENT BY PARISH

PARISH	TOTAL ACRES		REQUIRING TREATMENT				DOMINANT RESOURCE AREA*
			CROPLAND		PASTURELAND		
	CROPLAND	PASTURELAND	ACRES	PERCENT	ACRES	PERCENT	
Acadia	250,788	84,144	97,807	39	50,486	60	2
Allen	97,147	37,715	41,773	43	28,286	75	1
Ascension	20,762	70,628	11,211	54	29,664	42	3
Assumption	40,289	35,787	22,965	57	10,736	30	3
Avoyelles	176,274	101,354	81,086	46	57,772	57	3
Beauregard	57,562	120,772	36,264	63	44,686	37	1
Bienville	1,050	48,350	777	74	32,395	67	1
Bossier	28,645	104,735	25,781	90	78,551	75	1
Caddo	44,291	132,561	39,862	90	102,072	77	1
Calcasieu	97,649	258,525	23,436	24	105,995	41	2
Caldwell	34,777	27,467	22,953	66	20,326	74	1
Cameron	27,334	79,370	10,387	38	41,272	52	2
Catahoula	209,834	39,883	144,785	69	29,912	75	3
Claiborne	2,400	63,055	1,896	79	47,291	75	1
Concordia	188,569	13,724	139,541	74	12,352	90	3
DeSoto	5,150	144,532	3,554	69	54,922	38	1
East Baton Rouge	13,000	118,404	7,800	60	80,515	68	2
East Carroll	182,144	26,571	125,679	69	23,914	90	3
East Feliciana	14,800	111,911	10,952	74	68,266	61	1
Evangeline	203,446	26,511	79,344	39	12,195	46	2
Franklin	224,448	90,230	154,869	69	58,650	65	2
Grant	19,911	35,170	17,920	90	26,378	75	1
Iberia	90,000	31,771	44,100	49	22,240	70	3
Iberville	47,940	56,541	25,408	53	24,878	44	3
Jackson	0	18,031	0	0	12,622	70	1
Jefferson	0	3,705	0	0	1,112	30	3

TABLE 4-2—*Continued*

PARISH	TOTAL ACRES		REQUIRING TREATMENT				DOMINANT RESOURCE
			CROPLAND		PASTURELAND		
	CROPLAND	PASTURELAND	ACRES	PERCENT	ACRES	PERCENT	AREA*
Jefferson Davis	239,147	100,972	102,833	43	64,622	64	2
Lafayette	60,136	76,455	25,858	43	58,106	76	2
Lafourche	34,972	85,811	19,235	55	30,034	35	3
LaSalle	3,000	12,314	1,950	65	8,620	70	1
Lincoln	0	33,345	0	64	26,676	80	1
Livingston	500	49,394	275	55	21,733	44	2
Madison	248,536	26,236	121,783	49	22,563	86	3
Morehouse	227,297	54,530	143,197	63	38,716	71	3
Natchitoches	63,000	154,113	56,700	90	138,702	90	1
Orleans	0	247	0	0	0	0	3
Ouachita	51,563	37,604	37,641	73	28,579	76	3
Plaquemines	0	21,736	0	0	6,521	30	3
Pointe Coupee	107,674	74,365	46,300	43	23,797	32	3
Rapides	81,100	124,404	25,141	31	52,250	42	1
Red River	35,000	46,644	28,350	81	23,322	50	3
Richland	196,559	69,707	127,763	65	48,795	70	3
Sabine	0	72,865	0	0	56,106	77	1
St. Bernard	0	2,223	0	0	667	30	3
St. Charles	1,746	19,990	960	55	5,997	30	3
St. Helena	2,500	51,840	1,750	70	27,475	53	1
St. James	29,021	26,554	16,832	58	7,966	30	3
St. John	13,789	14,122	7,170	52	4,237	30	3
St. Landry	248,601	105,103	124,301	50	51,500	49	3
St. Martin	68,152	66,957	29,987	44	40,174	60	3
St. Mary	48,306	37,403	29,467	61	14,961	40	3
St. Tammany	2,864	88,032	1,833	64	44,016	50	2
Tangipahoa	7,500	158,731	5,250	70	82,540	52	1
Tensas	235,199	30,189	150,527	64	18,415	61	3
Terrebonne	19,587	35,741	11,165	57	9,650	27	3

TABLE 4-2—*Continued*

PARISH	TOTAL ACRES		REQUIRING TREATMENT				DOMINANT RESOURCE AREA*
			CROPLAND		PASTURELAND		
	CROPLAND	PASTURELAND	ACRES	PERCENT	ACRES	PERCENT	
Union	0	51,129	0	63	35,790	70	1
Vermillion	205,643	223,396	61,693	30	73,721	33	2
Vernon	2,900	111,214	2,610	90	85,635	77	1
Washington	11,000	109,783	7,480	68	47,207	43	1
Webster	2,600	60,632	1,274	49	30,316	50	1
West Baton Rouge	21,115	30,261	11,191	53	9,078	30	3
West Carroll	157,034	63,784	95,791	61	47,838	75	2
West Feliciana	14,500	55,154	10,150	70	37,505	68	1
Winn	1,204	23,743	518	43	19,944	84	1
TOTAL	**4,519,955**	**4,175,320**	**2,477,125**	**3,470**	**2,339,306**	**3,619**	

SOURCE: Louisiana Soil and Water Conservation Committee.

*1 indicates Sloping Coastal Plain;
2 indicates Nearly Level Coastal Plain;
3 indicates Alluvial Plain.

FIGURE 4-1
COASTAL ZONE MANAGEMENT AREA

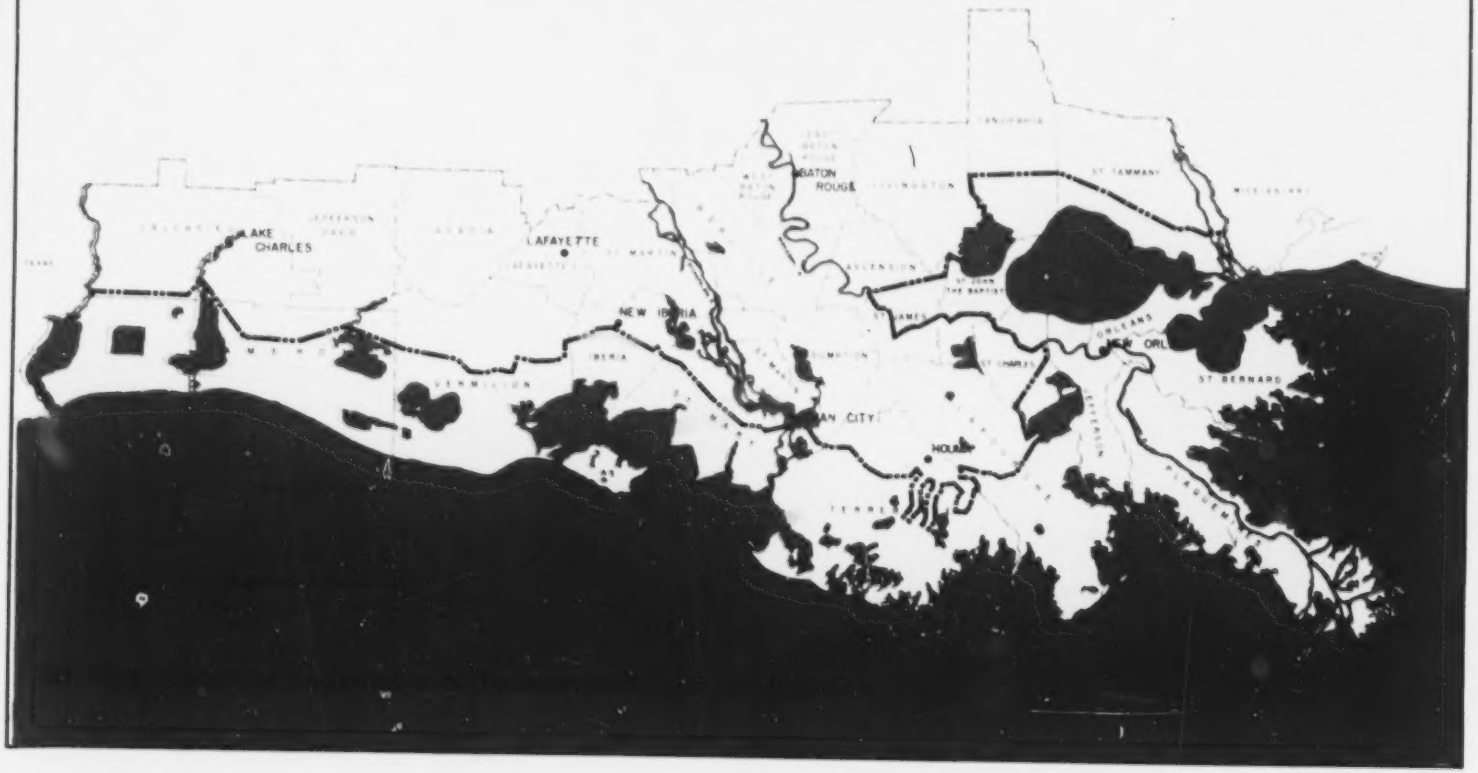
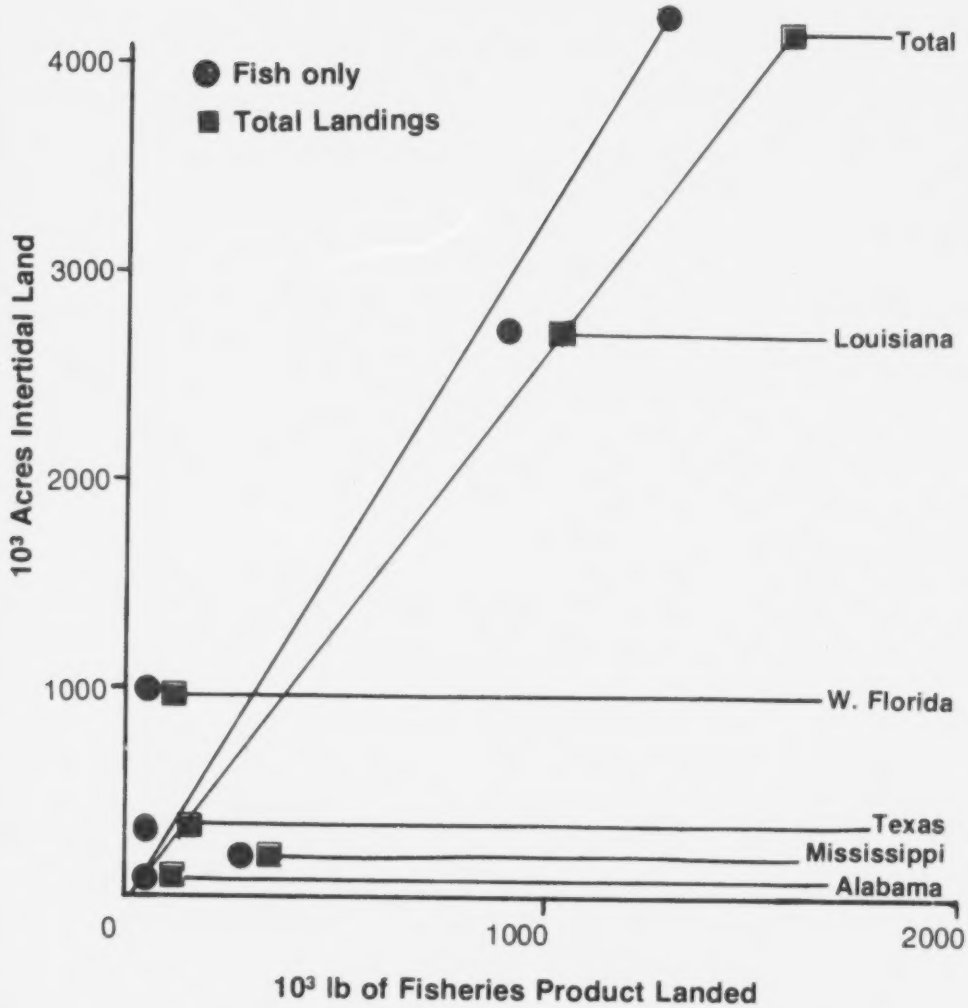


FIGURE 4-2

RELATIONSHIP BETWEEN FISHERIES YIELDS AND INTERTIDAL AREAS FOR THE GULF OF MEXICO



SOURCE: N. J. Craig, R. E. Turner and J. W. Day Jr., "**Cumulative Impact Studies in Louisiana Coastal Zone: Eutrophication and Land Loss,**" Center for Wetland Resources, Louisiana State University, June 1977.

The wetlands also render less obvious but hardly less important services to man. The interaction within the biomass (i.e., the plants and animals) of the wetland community is a necessary phase in the global cycles of nitrogen and sulphur—two elements critically important for the normal functioning of the entire biosphere. Further, the vast, mostly uninhabited marshes form a protective buffer zone that shelters inland areas from the worst effects of hurricanes and flooding. And, importantly, the wetlands possess largely untapped potential for the tertiary treatment of wastes. Proper utilization of the natural capability of the wetlands to recycle organic wastes could reduce the cost of waste treatment and simultaneously enrich the natural productivity of the area.

The inherent benefits provided by the wetlands are dependent upon the continued integrity of the area. Unfortunately, the coastal zone is suffering from major problems such as land loss, fresh water and saltwater imbalances and intense user activity. Land loss is occurring due to a variety of natural and man-made causes—e.g., geological subsidence and the construction of canals and waterways for navigation and for oil and gas drilling operations. One-fourth of the average annual 16.5 square-mile net land loss during the past 30 years is estimated to be the direct result of petroleum industry dredging. Moreover, the construction of canals and waterways in the wetlands has resulted in the alteration of water circulation and the intrusion of saltwater into vast areas of the zone. St. Bernard Parish officials estimate that thousands of acres of marshland have been destroyed as a result of the construction of the Mississippi River Gulf Outlet. If the wetlands are to continue to provide the services they now render, these detrimental processes must be reversed.

To address these problems the Louisiana Legislature passed the **State and Local Coastal Resources Management Act of 1978** (Act 361). Act 361 defines the coastal zone and provides the framework for a comprehensive planning and management program for the zone. Based on the coastal resources management legislation, the state now seeks to protect and, where feasible, restore or enhance coastal resources. Additionally, the state will encourage, develop and support multiple use of the coastal zone. The state has established a balanced policy calling for the maintenance and improvement of renewable resources while providing for adequate economic growth. Act 361 will increase state and local control of the wetlands by permitting the transfer of certain federal regulatory powers to state agencies and local governments. This legislation, together with an enhanced awareness of the potentials and problems of the wetlands,

proffers the opportunity for a new age in south Louisiana—one in which people work in cooperation with nature to provide mutually beneficial results.

WATER RESOURCES

Water is Louisiana's most abundant natural resource. Large rivers pour into the state vast amounts of water from other states. The inflow combines with plentiful rainfall, productive aquifers and a coastal area rich with bays and estuaries to provide Louisiana with the most profuse and diverse water resources of any state in the nation.

Perhaps because the state has such abundant water, the citizens of Louisiana in the past have treated water as a resource to be exploited rather than managed and developed. Recent increases in the demand for water and recurring isolated shortages of water have resulted in a greater awareness of the need for careful water-husbandry. Effective management of this resource for the maximum benefit of the people of Louisiana requires an understanding of Louisiana's water sources, the function of these in the natural system, and the state's various uses and demands for water.

Water occurs everywhere in the environment—in the air, in all plants and animals, in the soil, in deep geologic formations, and in lakes and streams. The presence of water in each part of the environment is vital to people. Two major water sources, surface water and groundwater, are particularly important in today's advanced society because they provide large quantities of relatively pure water.

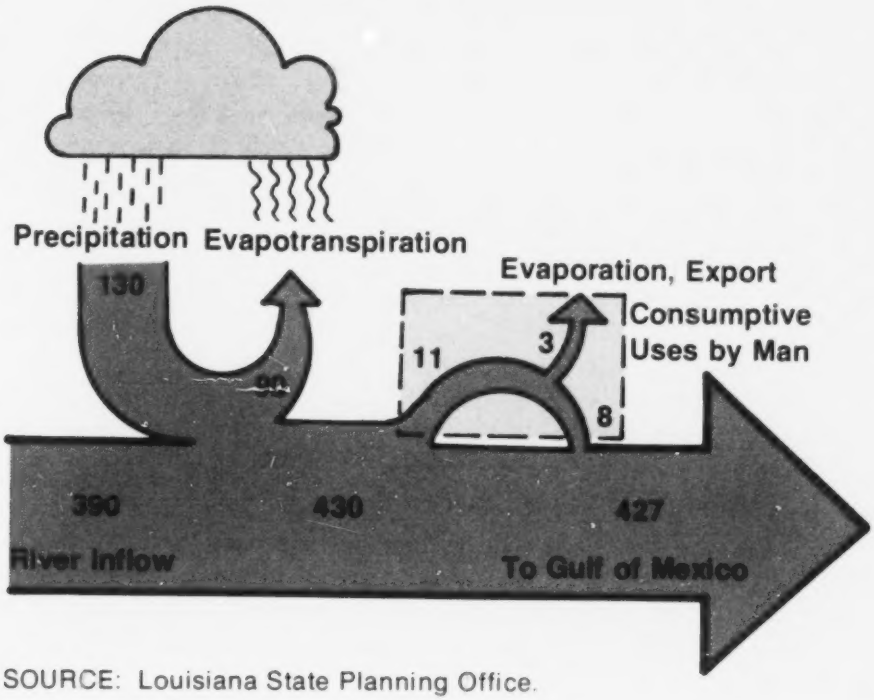
Surface Water

Over eight percent of Louisiana (not including the Gulf of Mexico) is covered by the streams, lakes, reservoirs, bays and estuaries comprising the surface waters of the state. These water bodies are derived from precipitation, riverine inflow from other states and tidal inflow from the Gulf. Figure 4-3 illustrates the origin and dynamics of water in Louisiana.

Virtually all surface water originates with precipitation. Precipitation within the state constitutes a major source of surface water. Louisiana's average annual statewide precipitation rate, 56 inches, is the highest in the United States. In-state precipitation contributes about one-fourth of the inflow of fresh surface water into Louisiana.

FIGURE 4-3

GENERALIZED WATER BUDGET OF LOUISIANA IN BILLIONS OF GALLONS PER DAY



SOURCE: Louisiana State Planning Office.

Much of this precipitated water is absorbed by the soil, used by plants in their natural growth processes and then transpired back into the atmosphere. The remainder of precipitated water either seeps into geologic formations or runs off into surface waters.

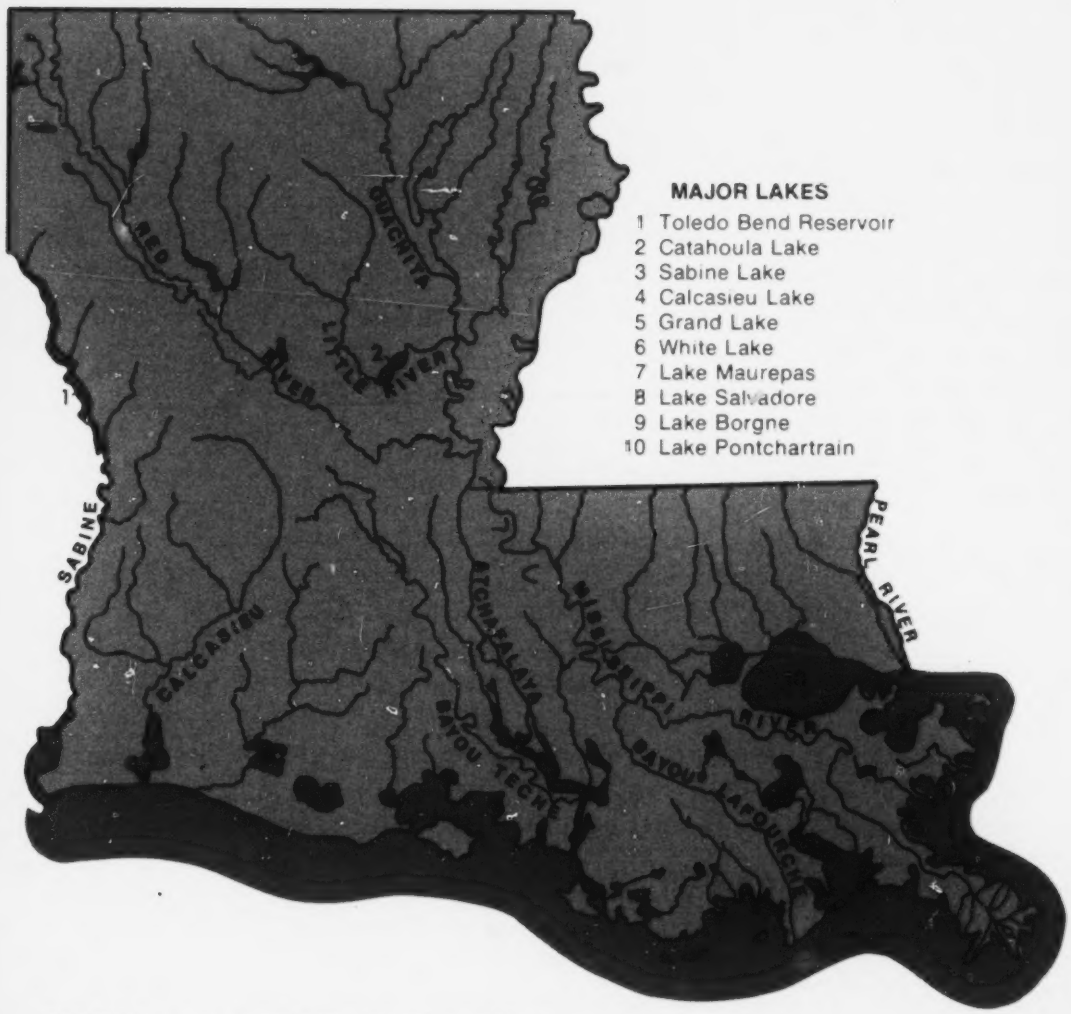
One of Louisiana's most characteristic features is the presence of numerous streams and lakes in the landscape. The high rate of precipitation and the presence of shallow aquifer systems combine to produce a fine network of small streams which flow together to form larger streams. In addition to streams that have their sources within the state, Louisiana is also the location of several large rivers which derive most of their water from other parts of the country. The Mississippi is, quite obviously, the largest. This mighty river empties over 4.5 million gallons of water into the Gulf every second. Louisiana is, in essence, a child of the Mississippi: much of the land of the state has

been deposited by the dynamics of the river. Other major rivers entering Louisiana are the Red, Ouachita, Pearl and Sabine. Each of these provides important water resources to the areas of the state through which they flow. The pattern of streams in Louisiana is shown in Figure 4-4.

Louisiana's coastal location and its great inflows of fresh water have made much of the southern part of the state an area of fresh and

FIGURE 4-4

MAJOR LAKES AND STREAMS



SOURCE: Louisiana State Planning Office.

salt water mixing. The large coastal lakes and bays such as Lake Pontchartrain, Barataria Bay, Atchafalaya-Vermilion Bay, White Lake and Calcasieu Lake all function in the mixing process. These areas of brackish waters, nursery grounds for many marine organisms, are largely responsible for Louisiana's rich harvest of seafood.

Groundwater

"Groundwater" is a term applied to water contained in permeable layers of rock called aquifers. In Louisiana most aquifers are composed of sand and gravel. These formations of coarse materials allow rapid infiltration, storage and passage of water. Variations in the thickness and composition of an aquifer affect the amount of water that it can produce.

Virtually all of Louisiana is underlain by aquifers. The most significant areas without an available fresh groundwater supply are located in the coastal part of the state (Figure 4-5). The quantity and quality of water available from aquifers is highly variable. Generally, aquifers in north Louisiana are less productive and yield water with a higher mineral content than south Louisiana aquifers. An exception to this occurs south of the latitude of New Orleans where most aquifers are unreliable for production and many are subject to saltwater intrusion.

Water Uses

The amount of water consumed for biological needs today is insignificant compared to the quantities devoted to other uses. Agriculture, many manufacturing processes, power generation, navigation and many kinds of recreation are dependent upon water.

Precipitation provides most of the water required for agriculture in Louisiana. In some parts of the state, notably the rice growing area of the southwest, seasonal water demands for crops necessitate that precipitation be supplemented from surface water or groundwater supplies. The largest consumers of surface water and groundwater supplies in Louisiana, electric power plants, utilize water primarily for condenser cooling. In the cooling process some of the water is evaporated and the remainder is returned to surface streams. Industry, another major consumer of water in Louisiana, also uses water for cooling; however, in this sector large amounts of water are incorporated into finished products. Approximately three-fourths of the

FIGURE 4-5

AREAS OF LOUISIANA LACKING SIGNIFICANT GROUNDWATER RESOURCES

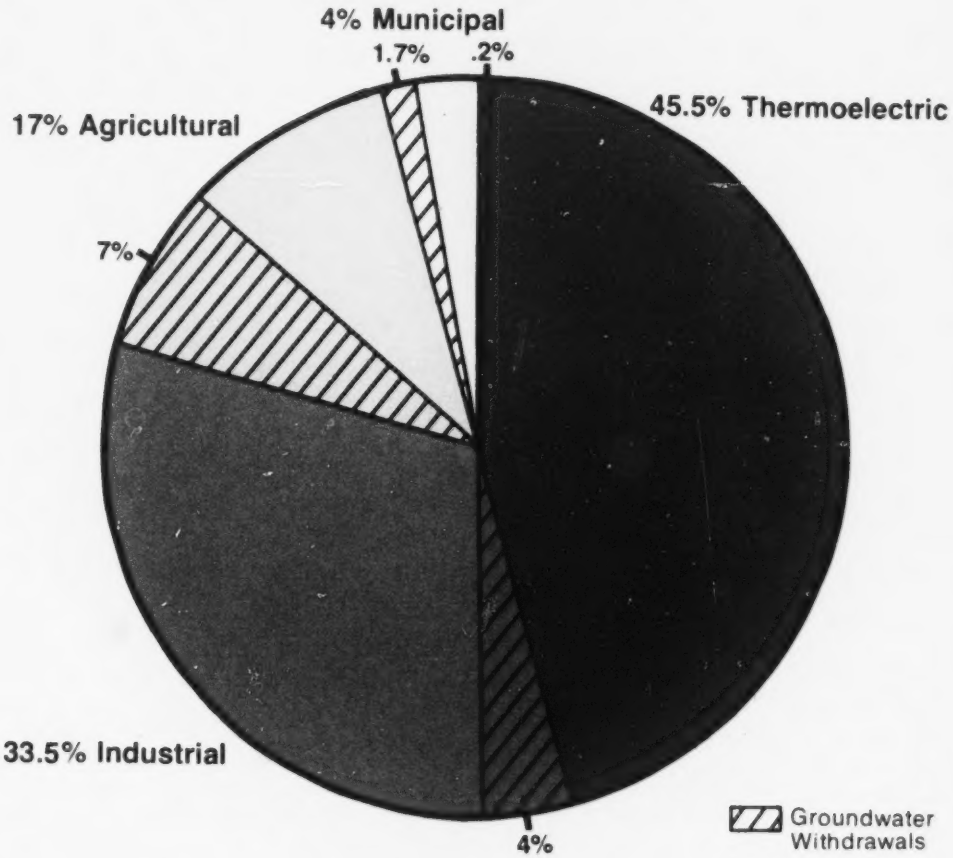
SOURCE: Louisiana Dept. of Public Works, **Groundwater Resources and Requirements for Louisiana**, 1971.

water used by industry is returned to surface waters. Municipal uses of water account for only four percent of the withdrawals in the state and over sixty percent of this amount is returned to the state's streams. The remainder is evaporated or absorbed by the soil. Figure 4-6 illustrates water consumption by sector for Louisiana.

Some uses of water are nonconsumptive (i.e., the water is not removed from its source and modified). Major nonconsumptive uses

include navigation, recreation and fisheries. Navigation is concentrated on the Mississippi, Red, Ouachita and Pearl rivers as well as on coastal waterways. The only requirement for navigational use is a channel of sufficient size. Recreation requires water with minimal pollutants to lessen the danger of human illness. Fisheries also require clean water to ensure maximum production of fish and shellfish products fit for human consumption.

FIGURE 4-6
SURFACE WATER AND GROUNDWATER CONSUMPTION BY SECTOR



NOTE: Circle equals 12.07 billion gallons per day.

SOURCE: **Louisiana's Water Resources.** Louisiana Department of Transportation and Development, Office of Public Works, 1978.

Water Problems

Louisiana's water problems can be summed up in three phrases: too much water, too little water and impure water. The flooding associated with too much water from major rivers has been lessened by the construction of flood control devices such as levees and spillways. Nonetheless, localized flooding still occurs along smaller streams and in coastal areas during tropical storms and hurricanes. In southwestern Louisiana large withdrawals from surface water sources have caused local problems of insufficient supply and saltwater intrusion into streams. Groundwater supplies in a few areas of southeastern Louisiana are threatened by salt intrusion.

A major and chronic water problem in Louisiana is water pollution. Louisiana's subtropical location and naturally nutrient-rich water tend to worsen the effects of man's pollutant inputs. (A more complete survey of water pollution problems is presented in chapter 5, "Environmental Quality".)

MINERAL AND ENERGY RESOURCES

Louisiana's mineral resources—crude oil, natural gas, salt, sulfur, sand and gravel—are among the state's most valuable assets. Industries that produce and refine these minerals constitute an important source of employment and income. Severance taxes accruing from the production of mineral resources generate approximately 40 percent of state government revenue—freeing Louisiana citizens of a substantial tax burden. The national and international situation of decreasing availability of mineral raw materials—particularly hydrocarbon minerals—has magnified the importance of these resources.

(Statistics for this section were provided by the Louisiana Department of Natural Resources and the Louisiana State Planning Office.)

Nonfuel Minerals

Louisiana is a major source of several nonfuel minerals. The state leads the nation in salt production and ranks second in sulfur mining (Table 4-3). Moreover, Louisiana produces significant quantities of sand and gravel, lime and clays. The value of nonfuel mineral production in Louisiana in 1978 exceeded $150 million.

TABLE 4-3
NONFUEL MINERAL PRODUCTION IN LOUISIANA

Mineral	1977 Short Tons (thousands)	1977 Dollar Value (thousands)	1977 National Rank	1978* Short Tons (thousands)	1978* Dollar Value (thousands)	1978* National Rank
Clays	401	$ 785	27	429	$ 2,490	27
Lime	W†	W	15	W	W	16
Salt	13,201	96,878	1	13,547	97,230	1
Sand and Gravel	21,987	50,790	13	22,000	52,000	13
Sulfur ‡	2,455	W	2	W	W	2

SOURCE: Louisiana State Planning Office based on information supplied by U.S. Bureau of Mines.

* Figures for 1978 are preliminary and subject to change.
† W indicates information withheld.
‡ Sulfur is measured in long tons.

Mineral Fuels

Based on consumption, the nation's primary fuels are oil and gas. Louisiana leads the nation in natural gas production and ranks second in oil production. During 1976 the state accounted for 29 percent of the domestic production of oil and gas (Figure 4-7). Only Texas produced more—38 percent. Louisiana and Texas provided almost 70 percent of the domestic production of hydrocarbons.

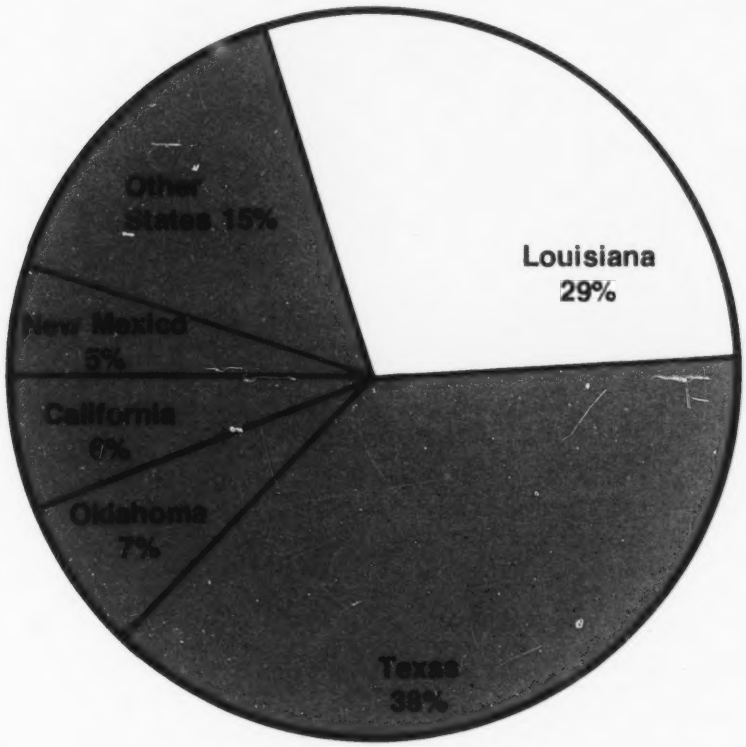
In spite of these impressive statistics, production of natural gas in Louisiana, including federal offshore, has declined since 1972 (Figure 4-8) and production of oil, including federal offshore, has decreased since 1971 (Figure 4-9). In addition, discoveries of new gas and oil have sharply declined (Figures 4-10 and 4-11)—a reflection of both federal price control effects and increased drilling costs resulting from less accessible resources.

Although the nation has enjoyed adequate annual supplies of natural gas since 1960, the present lower reserve back-up portends possible shortages and makes risky an inordinate dependence on natural gas. (The long run risk associated with a dependency on natural gas went unrecognized until recently since adequate annual supplies were available during the period from 1960 to 1976.) In 1960 the reserve-to-production ratio for natural gas in Louisiana was 20-to-1; by 1977 the ratio had fallen to 7-to-1 (Figure 4-12). The 1960

reserve-to-production ratio for oil in Louisiana was 14-to-1; by 1977 the ratio had fallen to 6-to-1.

FIGURE 4-7

TOTAL U. S. OIL AND GAS PRODUCTION, 1976

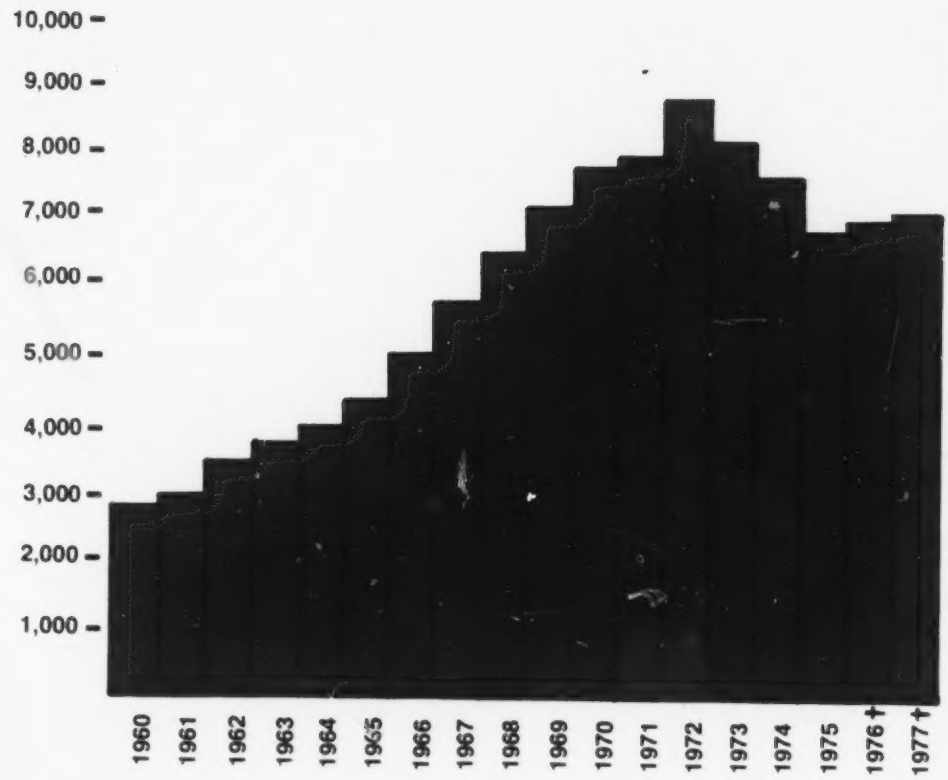


SOURCE: Louisiana State Planning Office.

Louisiana's lower reserve position for gas and oil partially reflects the fact that onshore and offshore fields are being depleted. Although Louisiana has fixed geological characteristics, the reserve position and annual production rate can fluctuate given changes in economic factors such as legal requirements, resource prices, and material, labor and exploration costs. The recent loosening of price controls has resulted in an expansion in the number of producing wells and a contraction in the rate of decline of production that should continue through 1979 and result in stabilized production by 1982.

FIGURE 4-8

TOTAL LOUISIANA NATURAL GAS PRODUCTION, 1960-1977*
(million mcf)

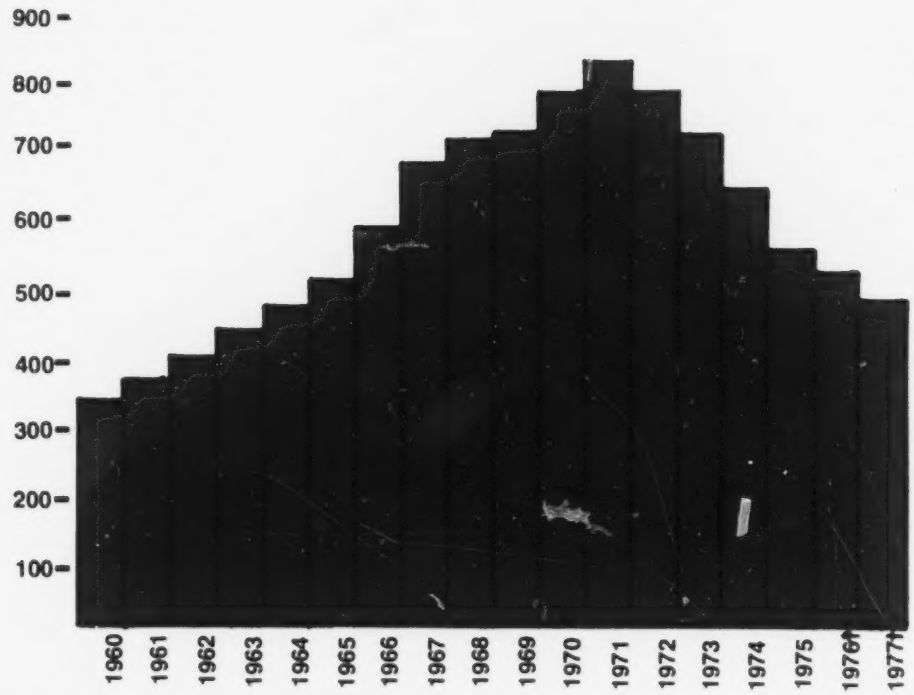


SOURCE: Louisiana Department of Natural Resources, Louisiana Office of Conservation, **Annual Oil and Gas Report, 1960-1977.**

* Includes federal offshore.
† Estimated.

FIGURE 4-9

TOTAL LOUISIANA CRUDE OIL PRODUCTION, 1960-1977*
(millions of barrels)

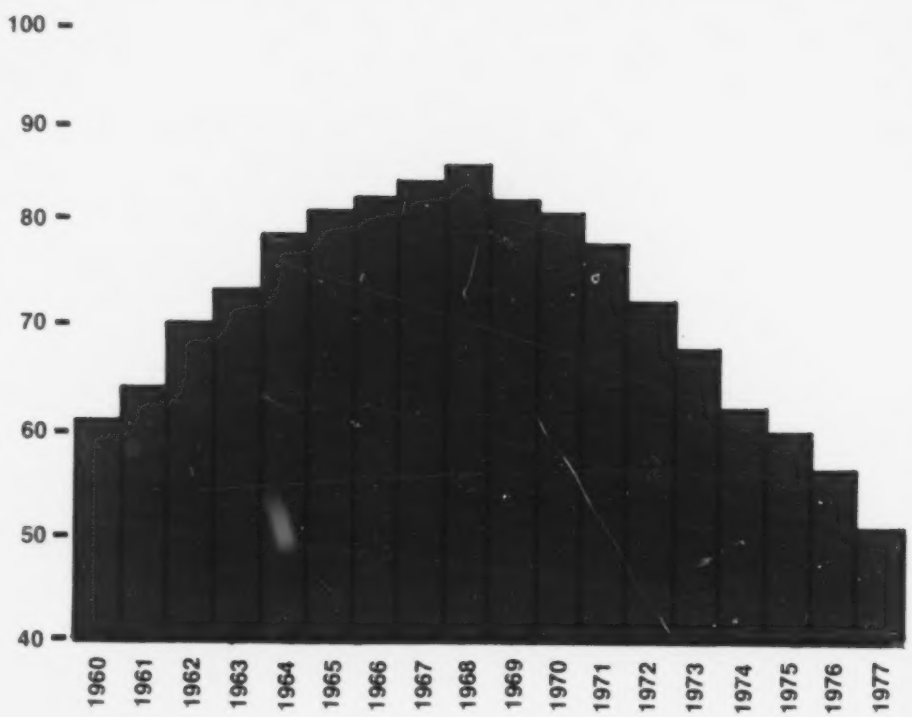


SOURCE: Louisiana Department of Natural Resources, Louisiana Office of Conservation, **Annual Oil and Gas Report, 1960-1977.**

*Includes federal offshore.
†Estimated.

FIGURE 4-10

PROVED RESERVES OF NATURAL GAS IN LOUISIANA, 1960-1977*
(billion mcf)

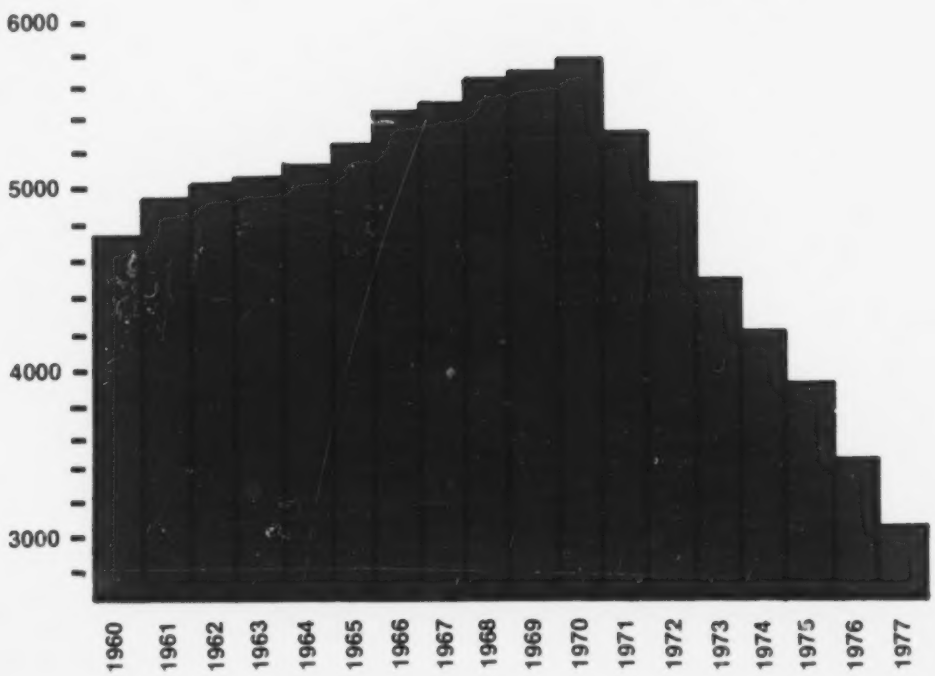


SOURCE: American Gas Association.

*Includes federal offshore.

FIGURE 4-11

PROVED RESERVES OF CRUDE OIL IN LOUISIANA
1960-1977*
(millions of barrels)

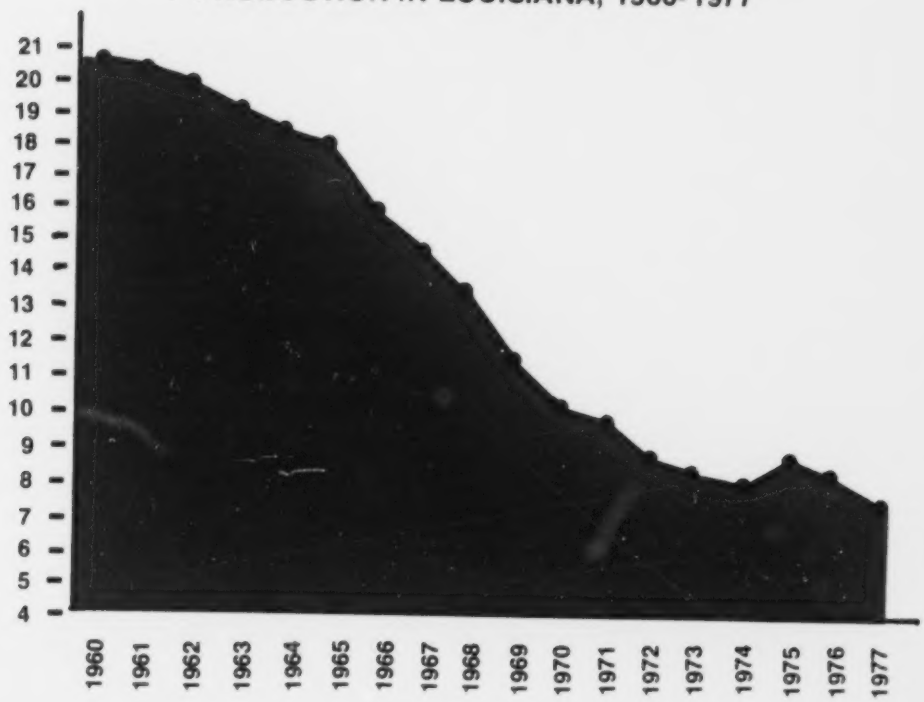


SOURCE: American Petroleum Institute,
Reserves of Crude Oil and Natural Gas.

* Includes federal offshore.

FIGURE 4-12

RATIO OF PROVED NATURAL GAS RESERVES TO PRODUCTION IN LOUISIANA, 1960-1977



SOURCE: Louisiana State Planning Office.

Severance Taxes

Louisiana mineral resources provide a major source of tax revenues for the state. Severance tax collections have comprised an average of 38.5 percent of state revenues during the last 18 years. The percentage has fluctuated due to various changes in tax rates and tax bases (Table 4-4). For example, a dramatic decrease in the percentage contribution of the severance tax in 1970-1971 resulted from the implementation of an expanded sales tax and income tax base. A decline in mineral production caused a corresponding decline in revenue during 1971-1972. In 1973 a special session of the legislature approved bills lowering both the sales tax and the income tax and raising the severance tax. The severance tax contribution to state revenues, as a consequence of the new legislation, rose significantly.

TABLE 4-4
SEVERANCE TAX CONTRIBUTION 1960-1978
(millions of dollars)

Fiscal Year	Total Revenue Collection	Total Severance Tax Collections	% Contribution of Severance Tax
1960-1961	$344.9	$147.1	42.7
1961-1962	362.8	149.9	41.3
1962-1963	340.5	163.2	47.9
1963-1964	405.9	172.2	42.4
1964-1965	439.6	178.6	40.6
1965-1966	506.5	205.0	40.5
1966-1967	537.8	213.9	39.8
1967-1968	575.3	238.1	41.4
1968-1969	595.0	240.2	40.5
1969-1970	620.5	249.1	40.1
1970-1971	764.8	254.9	33.3
1971-1972	856.9	242.3	28.3
1972-1973	908.1	265.4	29.2
1973-1974	1024.4	387.9	37.9
1974-1975	1277.1	546.0	42.8
1975-1976	1375.8	515.7	37.5
1976-1977	1351.0	492.9	36.5
1977-1978	1361.3	474.2	30.4

SOURCE: Louisiana Department of Revenue and Taxation.

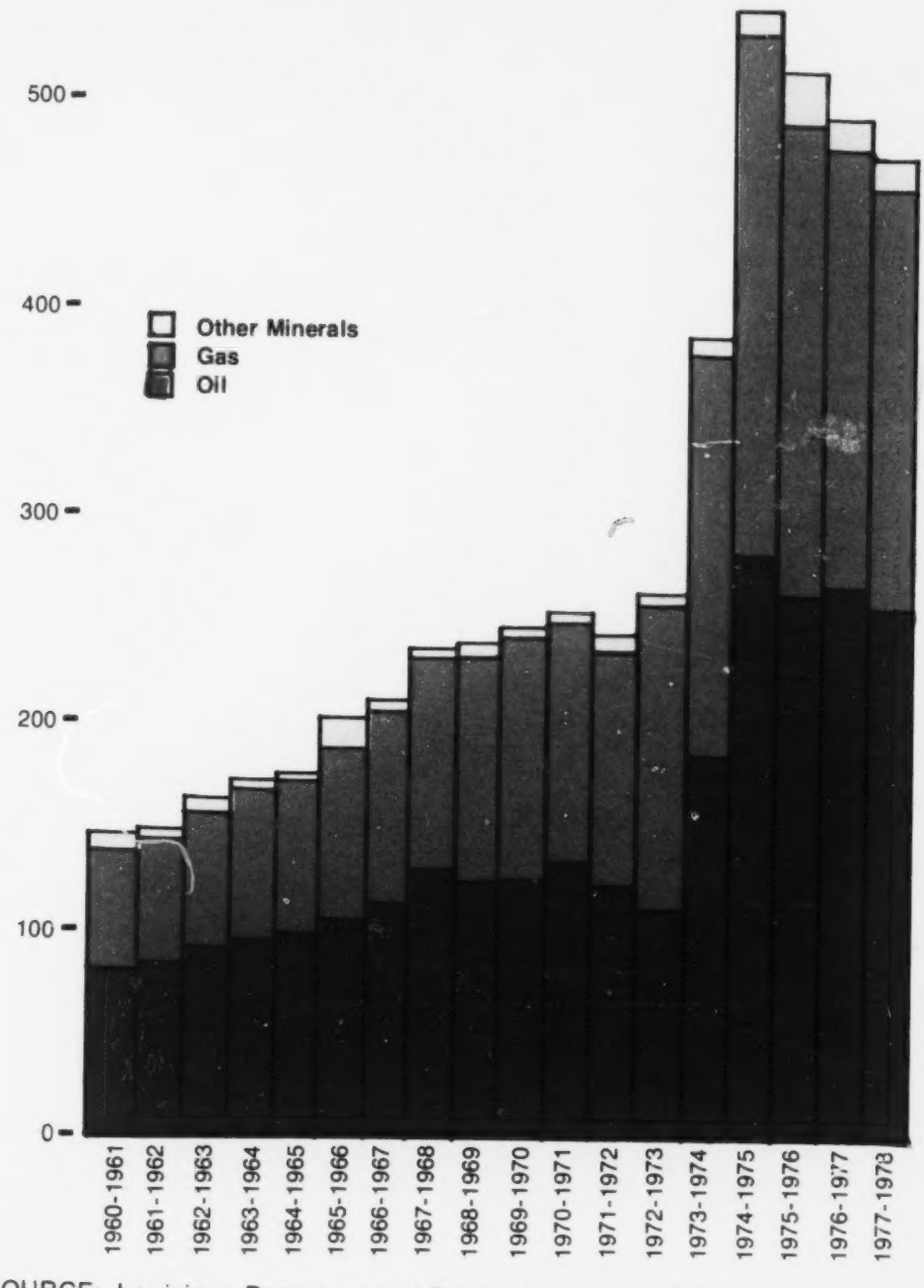
Notwithstanding fluctuations caused by changes in both the tax base and the tax rate, the severance tax continues to provide Louisiana's most important revenue source.

Severance taxes on oil and gas comprised the largest percentage of total severance tax collections during Fiscal Year 1978 (Figure 4-13)—97.3 percent. Louisiana depends more heavily on oil and gas resources for revenue than any other state in the nation.

Table 4-5 presents severance tax collections by parish; Table 4-6 shows severance tax collections by resource. A major proportion of severance tax revenues emanates from coastal parishes since offshore petroleum is attributed to these parishes: seven coastal parishes accounted for 67 percent of severance tax revenues for Fiscal Year 1978.

FIGURE 4-13

LOUISIANA OIL AND GAS CONTRIBUTION TO SEVERANCE TAX, 1960-1978



SOURCE: Louisiana Department of Revenue and Taxation.

TABLE 4-5
SEVERANCE TAX COLLECTIONS BY PARISH RANK, 1977-1978
(thousands of dollars)

Parish	Rank	Collections	Parish	Rank	Collections
Plaquemines	1	$75,690	St. James	33	$1,785
Terrebonne	2	70,630	Ouachita	34	1,705
Lafourche	3	42,268	Beauregard	35	1,640
St. Mary	4	42,074	Ascension	36	1,620
Iberia	5	35,430	Red River	37	1,061
Vermilion	6	28,314	Allen	38	1,027
Cameron	7	23,395	Tensas	39	950
St. Martin	8	11,571	Winn	40	907
St. Charles	9	10,990	Avoyelles	41	899
Jefferson Davis	10	10,970	Union	42	875
Jefferson	11	10,837	East Baton Rouge	43	873
Acadia	12	10,567	St. John	44	801
Assumption	13	6,968	Jackson	45	801
Claiborne	14	6,912	West Baton Rouge	46	730
Calcasieu	15	6,842	Rapides	47	703
Iberville	16	6,457	Caldwell	48	523
St. Landry	17	5,599	Sabine	49	412
Richland	18	5,476	St. Tammany	50	309
Bossier	19	4,211	Madison	51	292
LaSalle	20	3,973	Vernon	52	238
Webster	21	3,882	Orleans	53	220
Natchitoches	22	3,710	St. Helena	54	206
Bienville	23	3,329	Washington	55	182
Evangeline	24	3,138	Morehouse	56	180
Caddo	25	3,079	Tangipahoa	57	179
Pointe Coupee	26	2,937	Franklin	58	175
St. Bernard	27	2,867	Livingston	59	175
Lafayette	28	2,763	Grant	60	170
Concordia	29	2,759	East Feliciana	61	81
Lincoln	30	2,523	West Feliciana	62	43
Catahoula	31	2,126	East Carroll	63	15
DeSoto	32	2,122	West Carroll	64	3

SOURCE: Louisiana Department of Revenue and Taxation.

TABLE 4-6
SEVERANCE TAX COLLECTIONS BY RESOURCE
TAX COLLECTED

Resources	Fiscal Year 1976	Fiscal Year 1977	% Change
Oil/Condensate	$269,874,158	$259,613,666	- 3.8
Gas	210,372,381	202,031,301	- 4.0
Gasoline + LPG	5,093,059	4,701,452	- 7.7
Sulfur	2,435,142	2,295,279	- 5.7
Timber	2,424,717	2,788,685	+15.0
Pulpwood	959,210	983,236	+ 2.5
Sand	549,085	542,366	- 1.2
Salt	378,022	369,153	- 2.3
Shell	364,112	363,294	- 0.2
Gravel	354,365	370,350	+ 4.5
Reforestation	76,687	76,092	- 0.8
Salt Brine	42,506	37,695	-11.3
Stone	15,093	15,988	+ 5.9
Total*	**$492,938,542**	**$474,188,564**	- 3.8

SOURCE: Louisiana Department of Revenue and Taxation.

* Will not total exactly due to rounding.

Energy

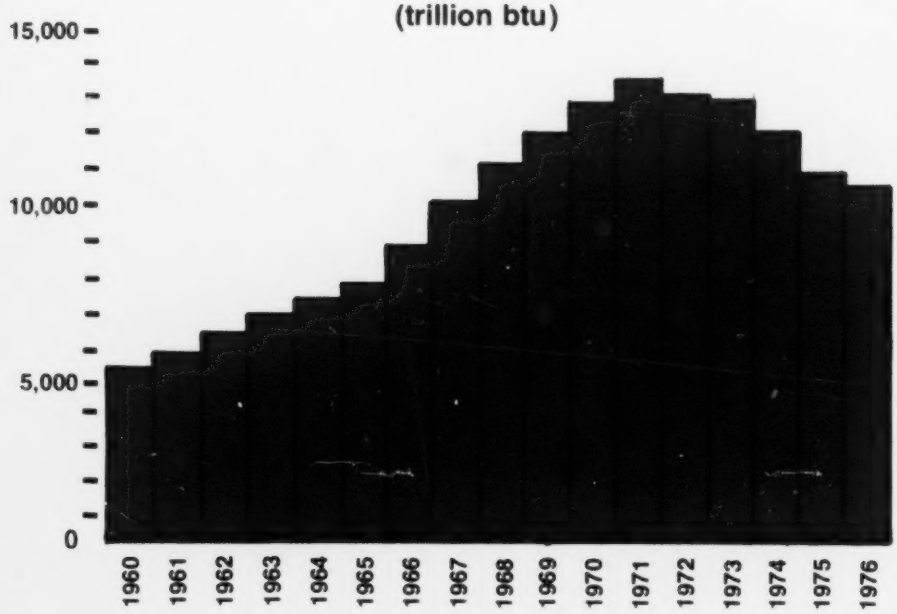
Although total energy production in the state has fallen since 1971 (Figure 4-14), Louisiana ranks second nationally in energy production (Figure 4-15). During 1976 Louisiana provided 19 percent of the nation's total domestic energy production; Texas, the nation's largest producer, contributed 25 percent. Louisiana and Texas together accounted for almost half of the nation's energy production.

Although a state's relative position as an energy producer is a fairly valid measure of the state's importance in the nation's energy supply, perhaps a more important factor is the net energy contribution per state. Net energy contribution—i.e., production minus consumption—represents a state's excess energy supply available for use outside the state. In terms of net contribution, Louisiana is the nation's largest energy producer.

Eleven states had a positive net energy balance during 1976. Louisiana produced one-third of the total net energy balance. Although Texas produced more energy than Louisiana, its net energy

FIGURE 4-14

TOTAL LOUISIANA ENERGY PRODUCTION
1960-1976
(trillion btu)



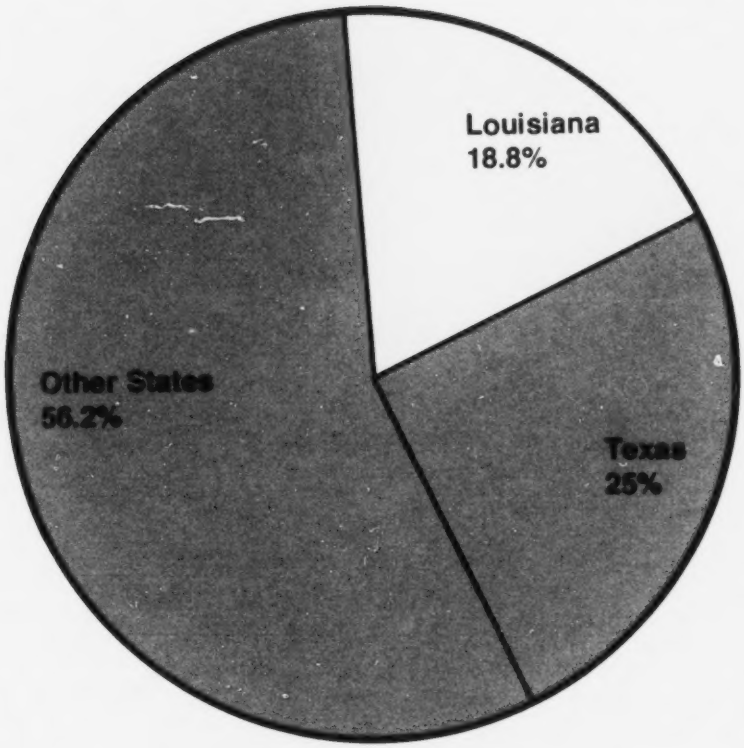
SOURCE: Louisiana State Planning Office.

balance was smaller; thus Texas contributed a lower amount of energy to other states than did Louisiana. Thirty-eight states consumed more energy than they produced during 1976.

Net energy balance provides a good indication of a nation's self-sufficiency. The United States—which was energy self-sufficient until a decade ago—had a net energy deficit during 1976, producing only 85 percent of its consumption that year. Louisiana's production, in contrast, exceeded state consumption by four-fold in 1976. Ironically, the 1976 Louisiana surplus is the lowest since 1960 (Figure 4-16). Louisiana's declining net balance is attributable to two factors—an absolute growth in energy consumption and a decrease in oil and gas production for the period from 1971 to 1976. Louisiana's surplus of production over consumption increased from 1960 to 1971 but has decreased since—in part, mirroring changes in oil and gas production.

FIGURE 4-15

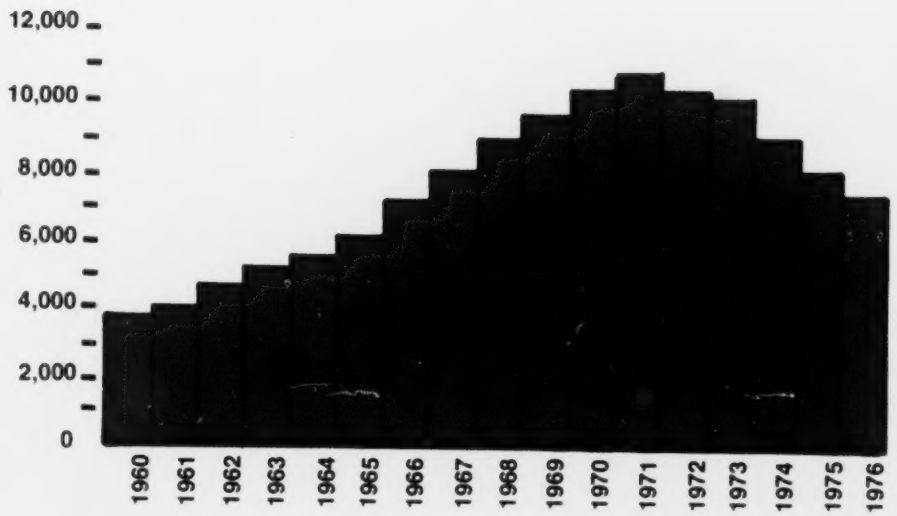
U. S. TOTAL ENERGY PRODUCTION, 1976



SOURCE: Louisiana State Planning Office.

FIGURE 4-16

LOUISIANA NET ENERGY BALANCE, 1960-1976
(trillion btu)



SOURCE: Louisiana State Planning Office.

Alternate Energy Sources

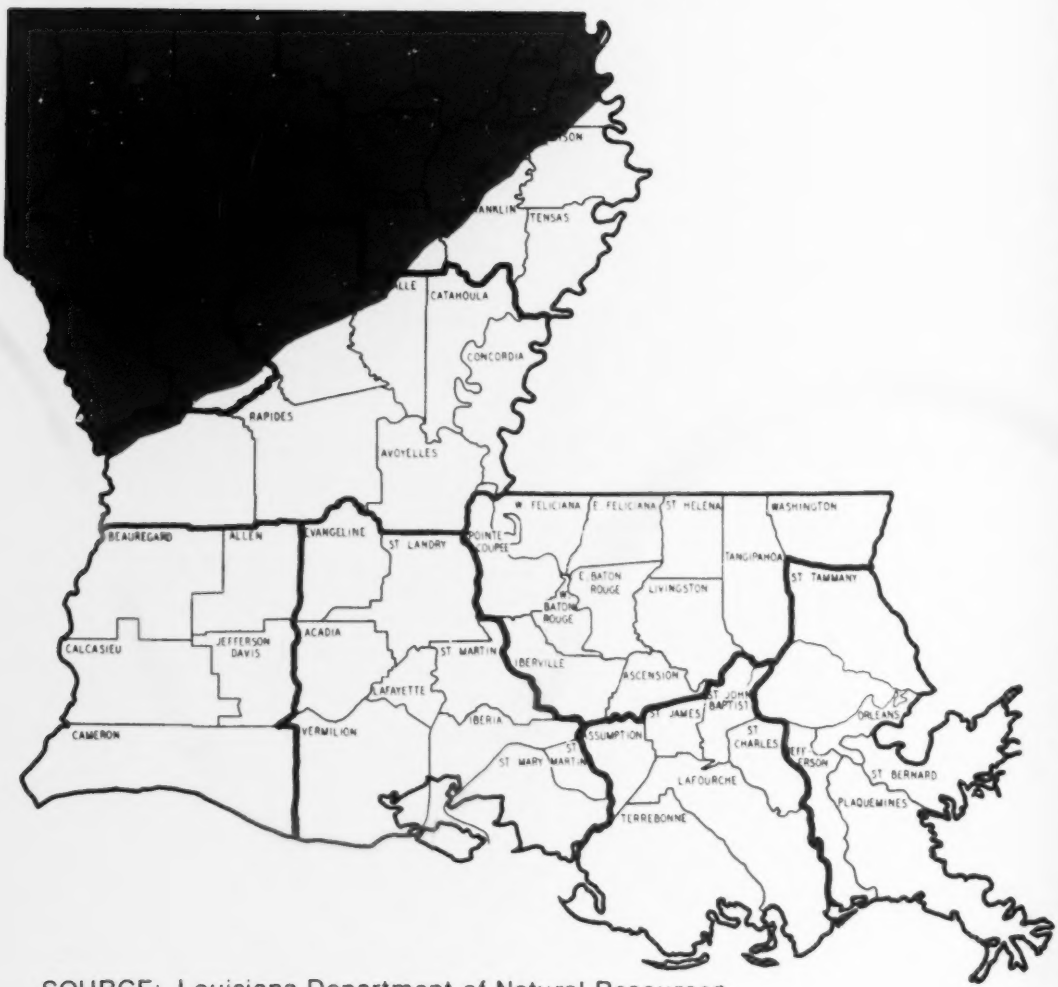
Louisiana has a number of other potential energy sources—e.g., geothermal and geopressure wells, solar technology, wind power and tidal energy. The upward trend in prices for oil, gas and coal should encourage the development of new sources and allow Louisiana to diversify its primary energy sources while continuing to be a major producer.

Two new sources are, in fact, now economically feasible—nuclear and coal. Louisiana utility companies plan to construct 3045 megawatts of nuclear capacity and 7530 megawatts of coal capacity by 1986.

In addition, discoveries of significant deposits of lignite throughout the northwest portion of the state (Figure 4-17) now proffer an alternate energy source as a result of advanced mining technology

FIGURE 4-17

LOUISIANA LIGNITE DEPOSITS



SOURCE: Louisiana Department of Natural Resources

and increased fuel prices. Lignite deposits occur in unconsolidated beds near the earth's surface (0-150 feet). Lignite is the lowest ranking coal in terms of btu's per pound; the value of Louisiana lignite ranges from 6,500 to 7,500 btu's per pound.

Geological evidence indicates that recoverable lignite reserves in Louisiana may total a billion tons—an amount estimated to equal more than two billion barrels of oil. Lignite reserves presently provide Louisiana with a feasible in-state alternative for oil and gas.

Consumption

(Data on energy consumption in Louisiana, the South and the nation are discussed primarily in terms of economic sectors.)

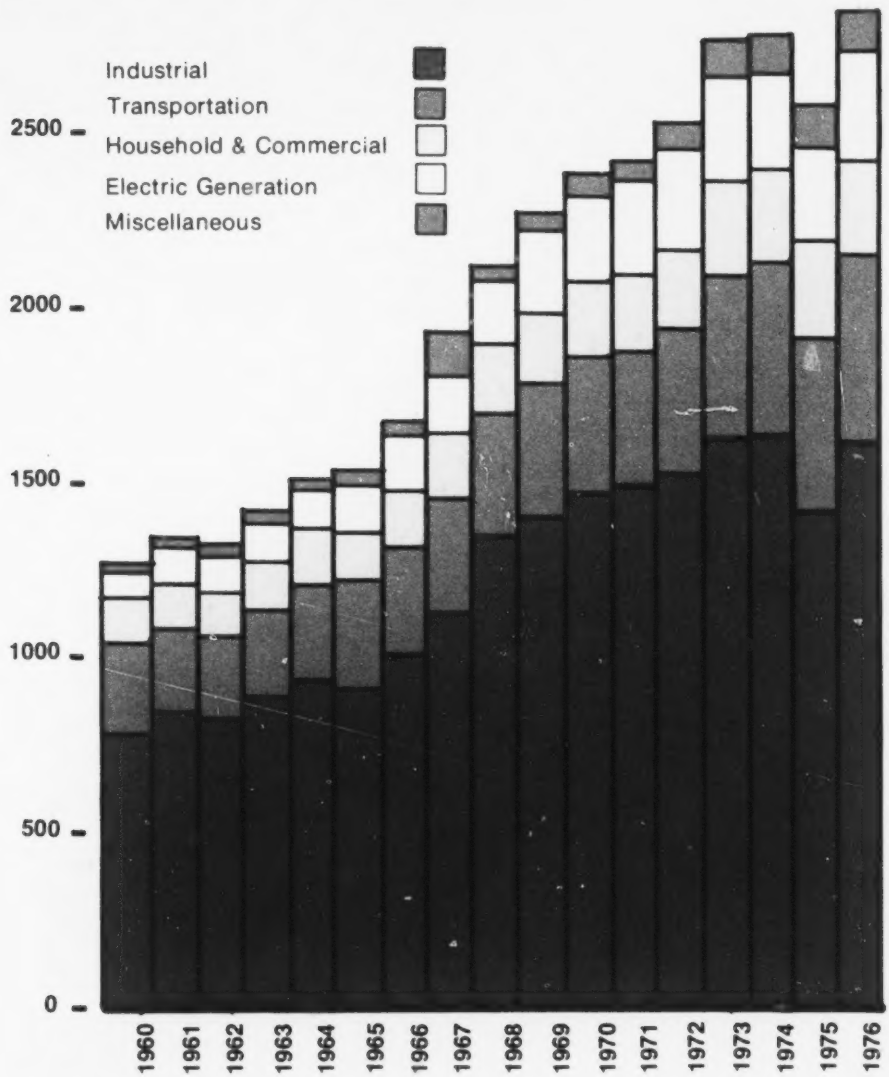
Energy consumption in Louisiana grew at an annual rate of 4.98 percent during the period from 1960 to 1975 (Figure 4-18)—exceeding the 3.28 percent annual rate of increase for the nation. The industrial sector is the major energy consuming sector in Louisiana (Figures 4-19 and 4-20). Since 1960 energy consumption in the industrial sector has increased at a rate of 4.54 percent. Industry's share of total energy consumption in Louisiana has declined, however, because of higher rates of increase in the energy consumption of two other economic sectors—the electric generating sector (7.97 percent) and the transportation sector (5.21 percent), the second largest energy consuming sector in the state.

The household and commercial sector showed the smallest rate of increase in energy consumption for the 1960-1975 period—4.35 percent. Energy consumption in this sector is quite modest: in 1976 Louisiana's household and commercial sector ranked thirty-ninth nationally in terms of energy consumption. The low consumption rate for this sector can be attributed, in part, to Louisiana's favorable climate and low per capita income.

Energy Intensiveness

"Energy intensiveness" is defined as the relative measure of energy input required to manufacture a product or achieve a desired goal such as transportation. The two largest energy consuming sectors in Louisiana—the industrial and transportation sectors—are energy intensive in comparison with the nationwide average (Figures 4-21 and 4-22). This fact does not mean that Louisiana industries are energy inefficient—i.e., relatively wasteful of energy. Energy intensiveness in Louisiana industries is explained by the type of industries locating in the state. Energy producing states tend to consume more energy because energy intensive industries (e.g., the aluminum and petroleum industries) locate near primary energy sources. Moreover, the processing of energy necessitates industries that are energy intensive—e.g., the petroleum refining industry. Louisiana's energy intensive industries principally produce bulk products to be finished in other states—products that are requisite for manufacturing sectors throughout the nation. A considerable amount of energy is embodied in these exported products, many of which are fuels.

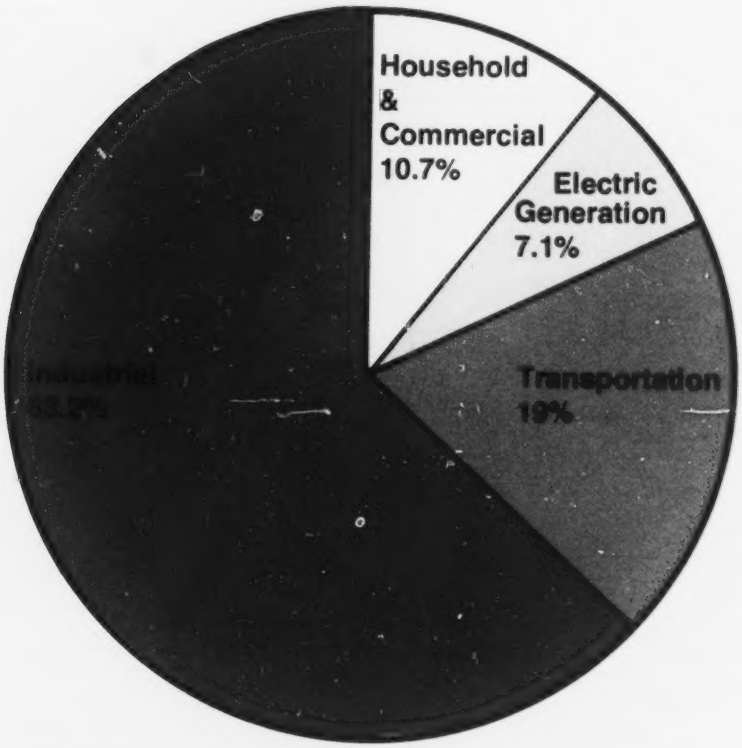
FIGURE 4-18
LOUISIANA ENERGY CONSUMPTION BY SECTOR
1960-1976
(trillion btu)



SOURCE: Louisiana State Planning Office.

FIGURE 4-19

LOUISIANA ENERGY CONSUMPTION BY SELECTED SECTOR, 1960



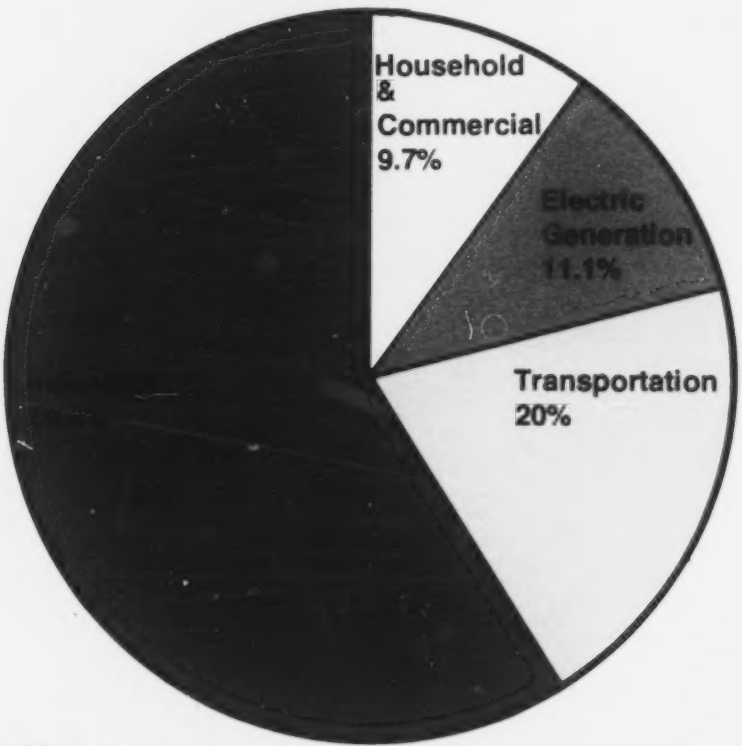
Total= 1273 trillion btu

SOURCE: Louisiana State Planning Office.

The transportation sector in the state is relatively energy intensive, per capita. Louisiana, with its major ports and pipelines, serves as a major conduit for the nation for oil, gas and other bulk products. This facet of the transportation sector, bulk transport, is energy intensive but necessary to provide other parts of the nation with these products. The other aspect, passenger transportation, is not energy intensive relative to other states. While energy consumption for passenger transportation is generally higher in the South, Louisiana's

FIGURE 4-20

LOUISIANA ENERGY CONSUMPTION BY SELECTED SECTOR, 1976



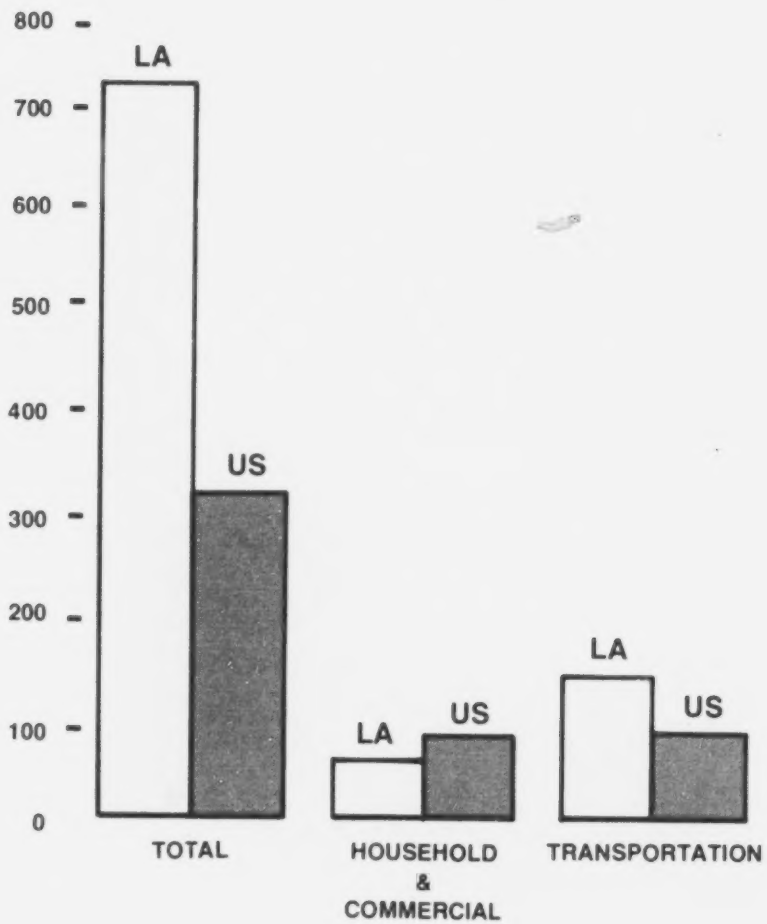
Total= 2769 trillion btu

SOURCE. Louisiana State Planning Office.

per capita gasoline consumption in 1976 ranked thirty-second nationally and was the lowest in the South. Thus, the energy intensiveness of Louisiana's transportation sector can be attributed to bulk transport destined largely for export.

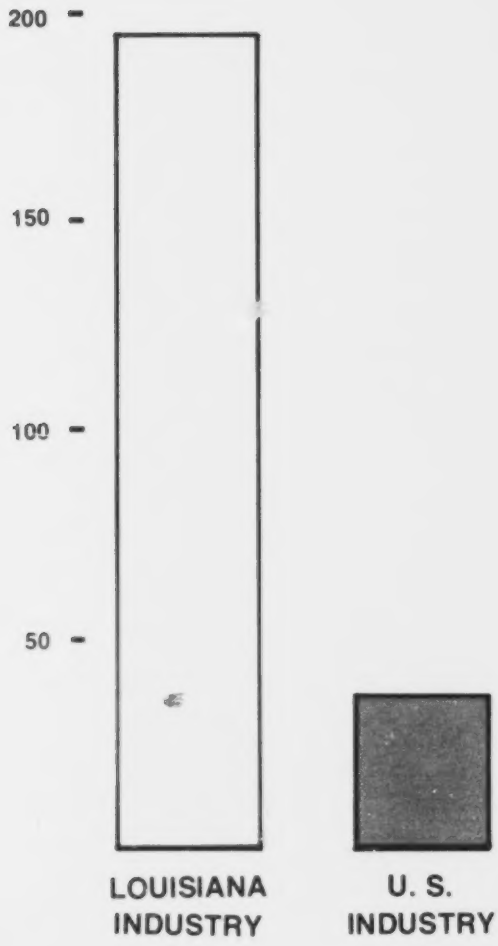
It is critically important to note that the two sectors which account for Louisiana's comparatively high rate of energy consumption provide requisite goods and services for the rest of the nation—i.e., Louisiana does not alone benefit from the energy consumed in these sectors.

FIGURE 4-21
PER CAPITA CONSUMPTION BY SELECTED SECTOR, LOUISIANA AND THE U. S., 1976
(trillion btu)



SOURCE: Louisiana State Planning Office.

FIGURE 4-22
INDUSTRIAL MILLION BTU PER $1000 VALUE ADDED

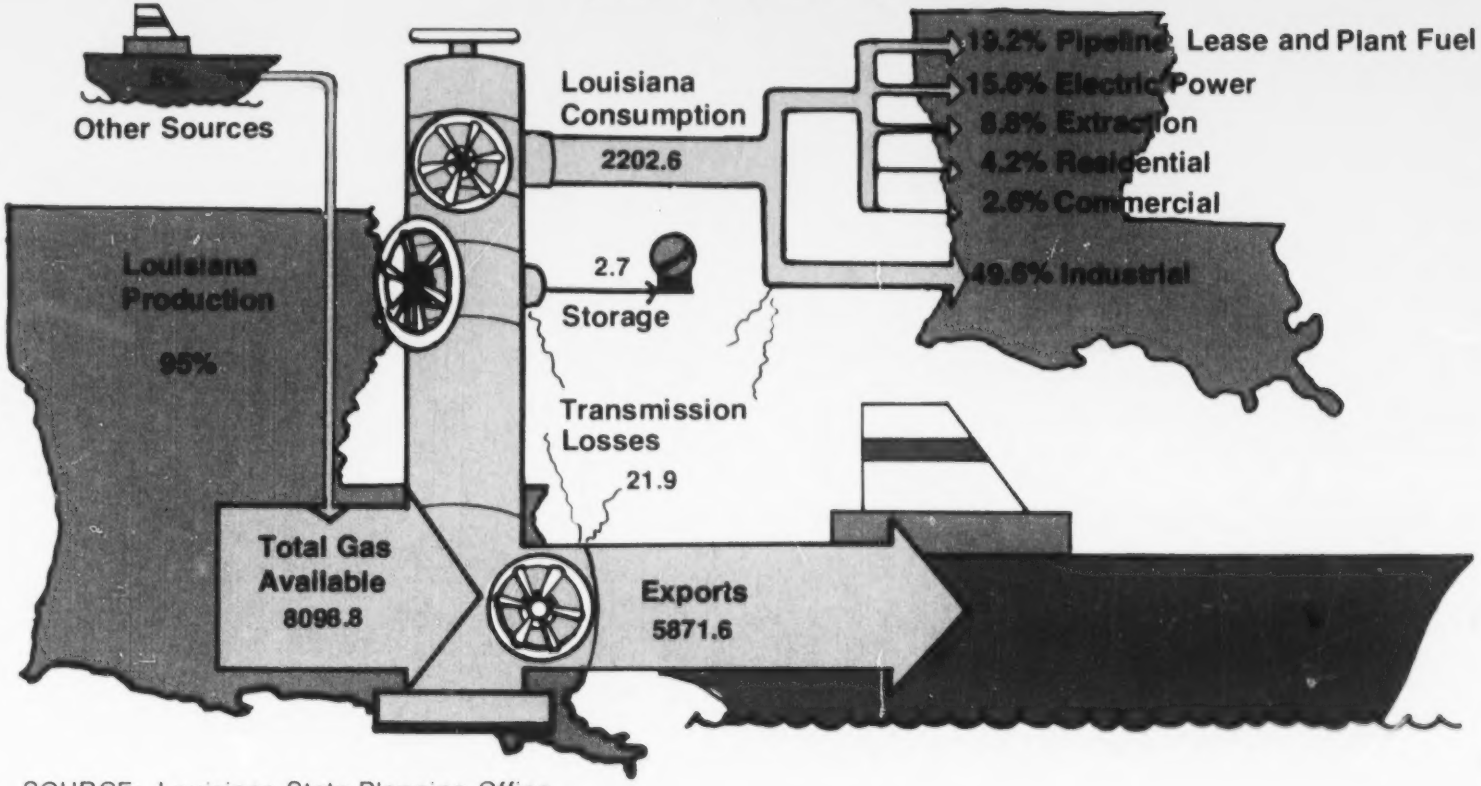


SOURCE: Louisiana State Planning Office.

Energy Flow

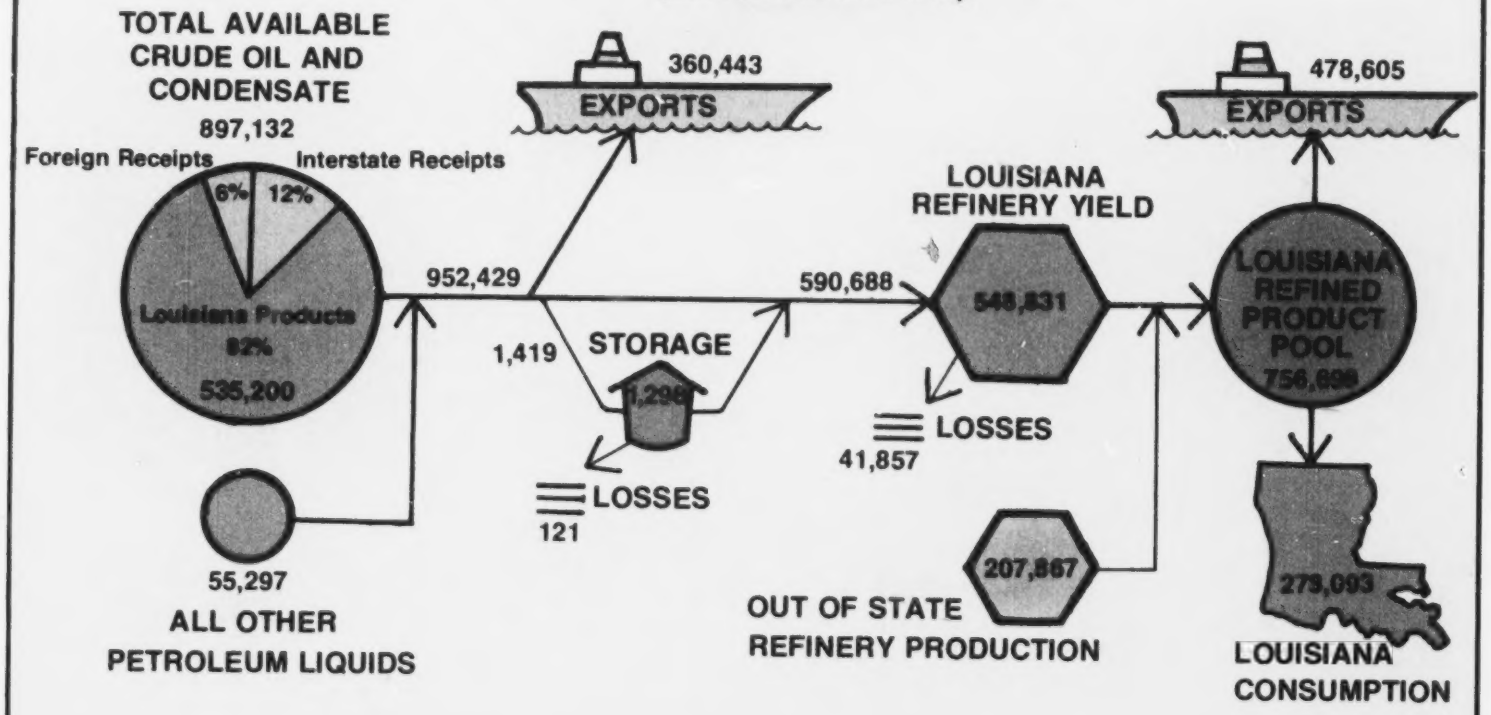
The flow of fuels from resource production through energy consumption is presented for natural gas (Figure 4-23), petroleum (Figure 4-24) and electricity (Figure 4-25). Significantly, Louisiana exports most of its mineral fuels—72.5 percent of its natural gas and 63.2 percent of its petroleum in 1974. The total energy export is, in fact, even higher since many industries in Louisiana export embodied energy in their finished products.

FIGURE 4-23
1974 LOUISIANA NATURAL GAS FLOW
(billions of cubic feet)



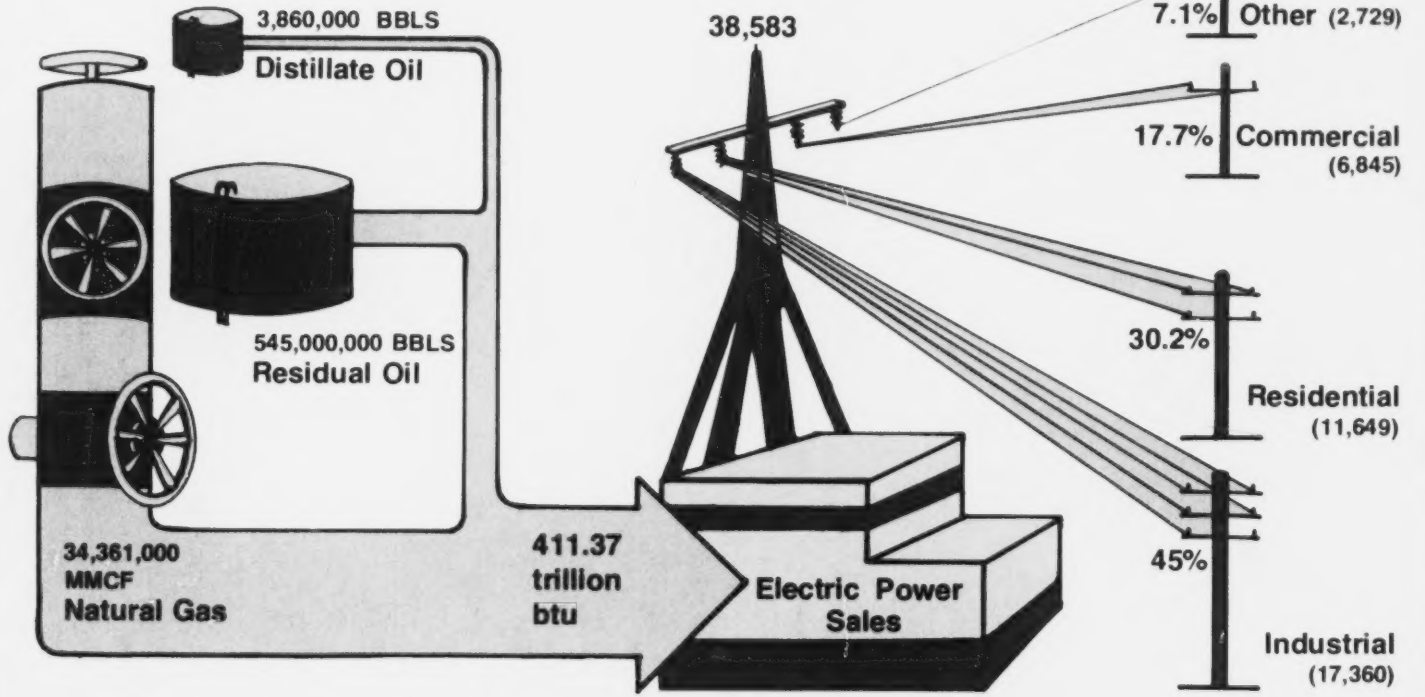
SOURCE: Louisiana State Planning Office.

FIGURE 4-24
1974 LOUISIANA PETROLEUM FLOW
(thousands of barrels)



SOURCE: Louisiana State Planning Office based on data from the Louisiana Department of Natural Resources.

FIGURE 4-25
1974 LOUISIANA ELECTRIC GENERATION
(millions of kwh)



SOURCE: Louisiana State Planning Office.

FISH AND GAME RESOURCES

Louisiana's animals are a renewable natural resource from which citizens of the state derive both recreational opportunities and economic benefits. More than most states, Louisiana relies upon its fisheries as a major food source. In addition, the exportation of large quantities of fish and shellfish generates important income. The diverse wildlife of Louisiana perform a necessary function in maintaining the balance of the environment. Moreover, Louisiana game proffer economic benefits through monies resulting both from the harvesting of pelts and the spending associated with sport hunting.

(An analysis of fish and game as recreational assets is provided in chapter 9, "Culture, Recreational Opportunities and Tourism".)

Fisheries

Shrimp

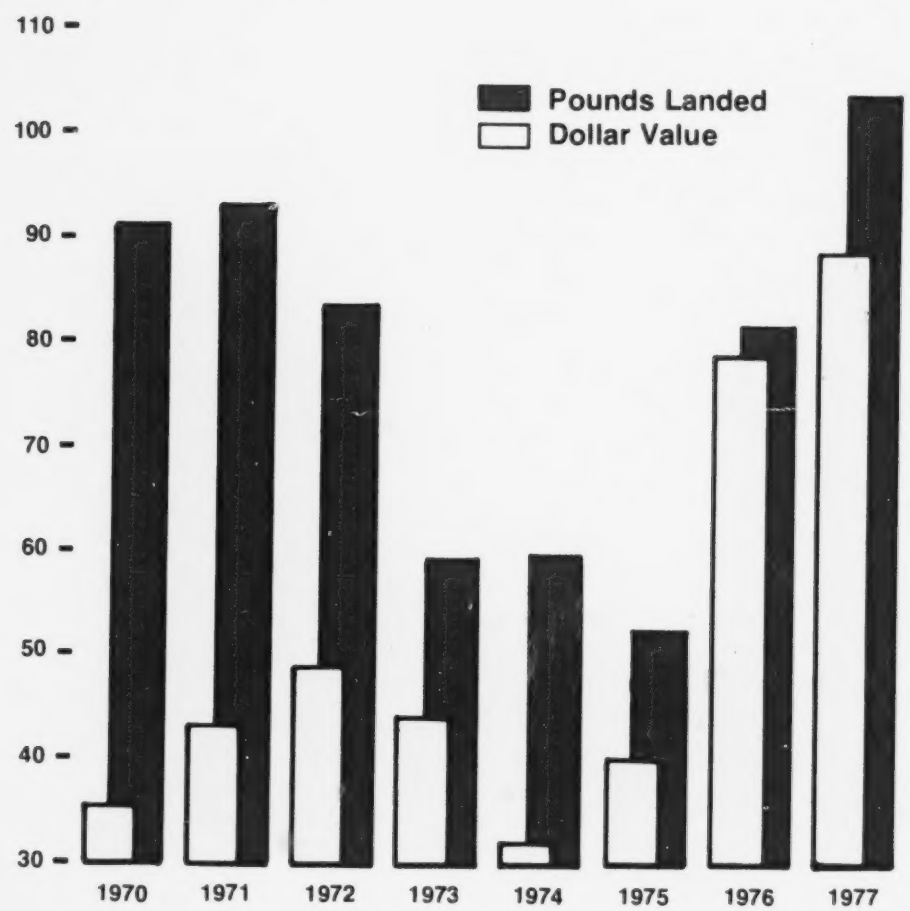
Shrimp landings in Louisiana totaled a record 104 million pounds (heads on) in 1977 with a dockside value of $87 million; the harvest increased 22 million pounds (27 percent) over the 1976 figures with an increase in value of $7.5 million (9 percent). Figure 4-26 shows Louisiana total shrimp landings for 1970-1977. Brown shrimp comprised 52 percent of the 1977 landings, white shrimp 43 percent and seabobs 5 percent. Prices paid to fishermen averaged $1.65 per pound for white shrimp, $1.11 per pound for brown shrimp and $.40 per pound for seabobs.

On May 16, 1977, the inside bays and waterways from the Mississippi River to Vermilion Bay were opened for shrimping. Participating in the 1977 fishery were more than 27,000 licensed commercial shrimpers and an estimated 40,000 recreational fishermen utilizing licensed sport trawls to take shrimp for home consumption.

Commercial catches were extremely heavy in the Barataria Bay and Terrebonne Bay systems during the first two weeks of the open season. The early influx of vessels returning to port to unload large catches of small brown shrimp glutted the market. Shrimp canners operating at maximum capacity could not handle the daily volume of shrimp, and as a result, trucks loaded with shrimp waited two and three days at the canners before unloading. Shrimpers in the eastern section of the state were put on a five barrel per day quota until canners were able to process the backlog of shrimp.

The shrimp market was generally strong in the early months of 1977, up 36 percent in comparison with 1976. Prices, which began

FIGURE 4-26
LOUISIANA SHRIMP LANDINGS, 1970-1977
(millions of pounds, millions of dollars)



SOURCE: U. S. Department of Commerce, National Marine Fisheries Service.

falling rapidly in May because of heavy landings, were 14 percent below the 1976 level by December 1977.

Menhaden

Menhaden landings for 1977 totaled 751.3 million pounds, valued at $28.7 million, down 305.8 million pounds (29 percent) and $8.4

million (23 percent) when compared with 1976 figures. Over 1,000 fishermen operating 65 vessels were employed by the fishery in 1977. The annual fishing season, established by the Louisiana Wildlife and Fisheries Commission in 1973, opens the third Monday in April and closes the second Tuesday in October. The menhaden processing industry—which produces fish meal, oil and solubles—was stable with a total of eight plants operating in Louisiana.

Preliminary catch information indicated that total landings of menhaden from Gulf states through August 1978 had increased an average of 66 percent above landings during the same period in 1977. Louisiana landings through August 1978 rose even more rapidly, up 78 percent over the previous year. The Louisiana menhaden industry dominated the Gulf fishery, maintaining an average 70 percent of Gulf landings for the period from 1948 to 1975.

Recent figures verify early predictions of a record menhaden catch in 1978. The previous Gulf menhaden record of 1.6 billion pounds set in 1971 was exceeded by 1978 menhaden landings of 1.8 billion pounds. The 1978 catch set a new national record for harvest of a single species.

Oysters and Clams

Oyster landings of 10.1 million pounds of meat valued at $10.4 million in 1977 were down 2.3 million pounds (19 percent) in volume and up $1.3 million in value in comparison with 1976 figures. The supply of oysters for canning, most of which are taken directly from state-owned reefs, was 17 percent below 1976. Approximately 1,000 oyster fishermen currently operate in Louisiana with over 200,000 acres of water bottom leased for oyster culture. Seed oysters taken from state-controlled areas to replenish private leases were extremely scarce in 1977. Dockside prices of oysters generally ranged from seven to nine dollars per sack.

Experimental commercial harvesting of hard clams (quahogs) in the Battledore Reef area of Breton Sound, Louisiana, began early in 1977. An estimated 10,000 bushels were harvested and sold to a processing firm in New Jersey. This Louisiana shellfish exists in sufficient quantities to augment substantially the production of East Coast surf clams, which until recently constituted the only major source of clam meat in the country. The growth of the clam industry in Louisiana will continue to depend heavily upon demand by eastern processors.

Crabs

The blue crab is the only commercial crab harvested in Louisiana. During the period from 1970 to 1977, Louisiana dominated the Gulf crab fishery, averaging 16.3 million pounds and $2.5 million annually. Landings of blue crabs in 1977 totaled 16.4 million pounds valued at $4.3 million, up 1.2 million pounds (7 percent) and up $1.1 million (34 percent) above 1976. Market demand was good with fishermen receiving an average $.26 per pound, up $.06 over 1976. Soft shell and peeler crabs were sold at a premium $2.53 per pound, up $.89 (54 percent) over 1976. The reported soft shell crab harvest in 1977 was 224,739 pounds, almost threefold the harvest of 1976 (88,205 pounds).

Crawfish

A special feature of south Louisiana culture is the harvesting and eating of crawfish. The state produces 90 percent of the crawfish in the nation; 85 percent of the crop is consumed within the state. The Atchafalaya Basin contributes the bulk of Louisiana crawfish in most years. Because of flood control regulations, the natural system in the basin is subject to marked variations in water levels—a situation resulting in large fluctuations in the number and size of crawfish produced. During the 1977-1978 season when basin water levels were ideal, approximately 60 percent of the state's 45 million pound production was taken there. A factor increasing the stability of the crawfish harvest is the growing number of "crawfish farms". These managed ponds now total over 50,000 acres in the state. Many of the ponds are rice fields regulated to improve the habitat for crawfish growth.

The past instability of production together with the highly perishable nature of these crustaceans has hampered the development of out-of-state markets. Nonetheless, Louisiana crawfish are now available in several large cities in the nation.

Edible Finfish

Landings of finfish used for human consumption equaled 21.4 million pounds in 1977, valued at $6.9 million, down 1 million pounds (4 percent) and up $1.2 million (21 percent) over 1976. Fresh water catfish landings were up 15 percent; however, red drum, spotted sea trout and flounder landings were down 20 percent or more in 1977. The average price paid to fishermen for all species of edible finfish was $.32 in 1977, up $.06 over 1976.

Game

Fur Bearers

For more than two centuries the harvest of pelts has been an important segment of the economy of south Louisiana. Bobcats, fox, otter, mink, raccoons, muskrats, nutria and other species are trapped to provide over $14 million annually for the state's economy. Louisiana leads the nation in the value of its fur harvest. Moreover, trapping provides gainful employment for nearly 10,000 people in the state.

Nutria and muskrats are the most important species harvested, accounting for 91 percent of the harvested pelts. Raccoons, also a major fur supply, brought nearly $2 million to Louisiana trappers during the 1977-1978 season. A federal-state controversy over otter population figures depressed the prices of pelts in 1978. While the federal government maintained that the otter might qualify as an endangered species, the Louisiana Wildlife and Fisheries Commission demonstrated that the otter population in Louisiana is stable and not endangered by trapping. The price for otter pelts is expected to recover and the otter should continue to provide valuable revenue for Louisiana.

The major threat to fur bearing species in the state is the reduction of habitat. This is especially true of woodland species such as bobcats, fox and beavers. Vast areas of bottomland hardwood forests in Louisiana have been cleared in recent years. This has reduced the size of harvest of fur bearing animals dependent upon this type of habitat.

Alligators

The Louisiana Department of Wildlife and Fisheries initiated comprehensive research programs aimed at management of alligators in 1958 when the population of the species had been reduced to such a level that concern for the survival of the species began to be expressed. Quite apparently, a harvestable surplus of animals no longer existed. The only sizeable alligator populations existing in Louisiana were on the state and federally owned refuges.

Since 1958 an active research program administered by the Refuge Division (Louisiana Department of Wildlife and Fisheries) has resulted in a progressive management scheme and, beginning in the 1970s several successful alligator seasons. Approximately $500,000 has been recorded for alligator hides during each of the past two seasons in the three coastal parishes approved by the U. S. Fish and

Wildlife Service for alligator hunting. The 1978 commercial and sport seasons in Cameron, Calcasieu and Vermilion parishes were postponed, however, based upon economic factors and trade restrictions that prevent alligator hides from moving in international commerce.

Provisions of the International Trade Convention Treaty (in effect since 1973) preclude the selling of American alligator hides abroad. American buyers of hides have absorbed Louisiana's total production from the past three years and have abundant stocks of alligator skins in storage. Federally licensed buyers have indicated that they are unwilling to purchase additional hides at any price under present regulations. The 1977 sale was the third since passage of the Endangered Species Act in 1973; since 1973 the price of alligator hides has declined each year as a direct result of export restrictions.

The Louisiana Department of Wildlife and Fisheries petitioned the U.S. Fish and Wildlife Service to request the removal of the alligator from the International Trade Convention Treaty, Appendix I—a listing of species not permissible in international trade. The Service made this request at a Treaty conference in the spring of 1979; the conference approved removal of the alligator from the Appendix.

Other Game

In addition to furbearers and alligators harvested for the value of their skins, other animals in Louisiana have economic importance to the state for their recreational and touristic value. Louisiana is famous for its abundant waterfowl. The coastal area of the state provides a habitat ideal for wintering migratory fowl. As a result of careful management by the Louisiana Department of Wildlife and Fisheries, larger bag limits can now be allowed for duck and geese hunters.

Inland areas, especially bottomland hardwood forests, produce abundant deer for hunting. During the 1977-1978 season 87,291 deer were taken, a 35 percent increase over the figure for the 1972-1973 season. Other hunted species whose populations appear to be on the increase include quail, wild turkey, woodcock and pheasants.

Many wild creatures live upon the 35 state-managed wildlife areas that total nearly 900,000 acres. Over one-third of this area is state owned; the remainder is leased from private owners. Hunting, fishing, wildlife observation and other recreational opportunities are provided for the public on wildlife management areas. Public response has been impressive—over six million man-days per year are

spent by recreationalists on these lands. The future of game production in the state is bright. Louisiana game should continue to provide an important recreational asset for residents and attract tourist dollars to the state.

CONCLUSION

The natural resources located within Louisiana and its adjacent offshore areas have an enormous impact on the daily lives of Louisiana citizens--perhaps more than is true for any other state. Thus, it is particularly important for Louisianians that these natural attributes be managed carefully to assure the state's receiving the maximum benefit from these valuable resources.

Chapter 5

The environment consists of all external substances and forces that react with or directly affect the growth, maintenance or reproduction of an organism. Environmental quality is measured by a "threshold level"—a point below which these functions of an organism are detrimentally affected. Humans are subject to the organic effects of environmental degradation; but in addition, people can be profoundly affected by their individual perceptions of the environment.

Naturally occurring environmental changes can detrimentally affect biological organisms, but human activities have produced traumatic and destructive environmental changes. In recent years people have begun to realize the negative impact on the environment of human activities. This new awareness of the delicate balance that exists between the environment and human activities has facilitated the identification of certain variables which are particularly important in determining the quality of the environment—e.g., the quality of water and air and the method of waste disposal.

WATER QUALITY

Many factors including source, discharges of contaminants from point and nonpoint sources, and interactive processes within water itself determine the quality of water. Water quality is measured by physical, chemical and biological assessments. Degradation of water quality is termed pollution. In the strictest sense, pollution is defined as any departure from purity; in the practical sense, however, the term denotes any departure from the condition acceptable for normal

uses of water. Thus, the introduction of any substance that prevents the normal use of water constitutes water pollution. Both groundwater and surface water are subject to pollution.

Normal uses for water include recreation and aesthetics, public water supply, biologic habitats, agriculture, industry and navigation. Quite obviously, water suitable for such normal uses as industry, navigation and agriculture might be unsuitable for such uses as recreation, public water supplies and biologic habitats. Thus, compromises or balances must often be reached in determining what is acceptable water quality.

Groundwater Quality

Louisiana's groundwater—i.e., water found naturally underground—is both plentiful and relatively free of bacterial contamination, according to recent surveys conducted by the Louisiana Groundwater Conservation Commission. Maintaining an adequate supply as well as an acceptable quality is essential since groundwater constitutes the principal water source for farming, industry, irrigation, and public and major municipal supplies for many areas of Louisiana. Some regions of the state have poor quality groundwater for drinking purposes. Generally, Louisiana's groundwater does not require treatment for use.

Louisiana enjoys a natural underground water filtration process: strata of sand, clay and other materials remove most contaminants and pollutants prior to seepage into underground water reservoirs. With continued statewide urban, suburban, industrial and agricultural development, however, groundwater problems may well result. The pollution of a groundwater reservoir can rarely be detected before the destruction of the resource; in most cases, by the time the pollution is recognized, little can be done technologically to restore the quality of the water.

Surface Water Quality

Levels of pollution in Louisiana surface waters vary across the state; causes of water pollution include industrial discharges, municipal discharges, agricultural runoff, urban runoff, oilfield brine discharges and saltwater intrusion. The Louisiana Stream Control Commission (whose eight members represent the Farm Bureau, the Department of Natural Resources, the Department of Transportation and Development, the Department of Health and Human Resources,

the Department of Agriculture, the Department of Wildlife and Fisheries, the Department of Commerce and the Office of the Attorney General) is the official entity charged with supervision of all waste discharges into Louisiana surface waters. (The commission is housed in the Department of Wildlife and Fisheries, Division of Water Pollution Control.)

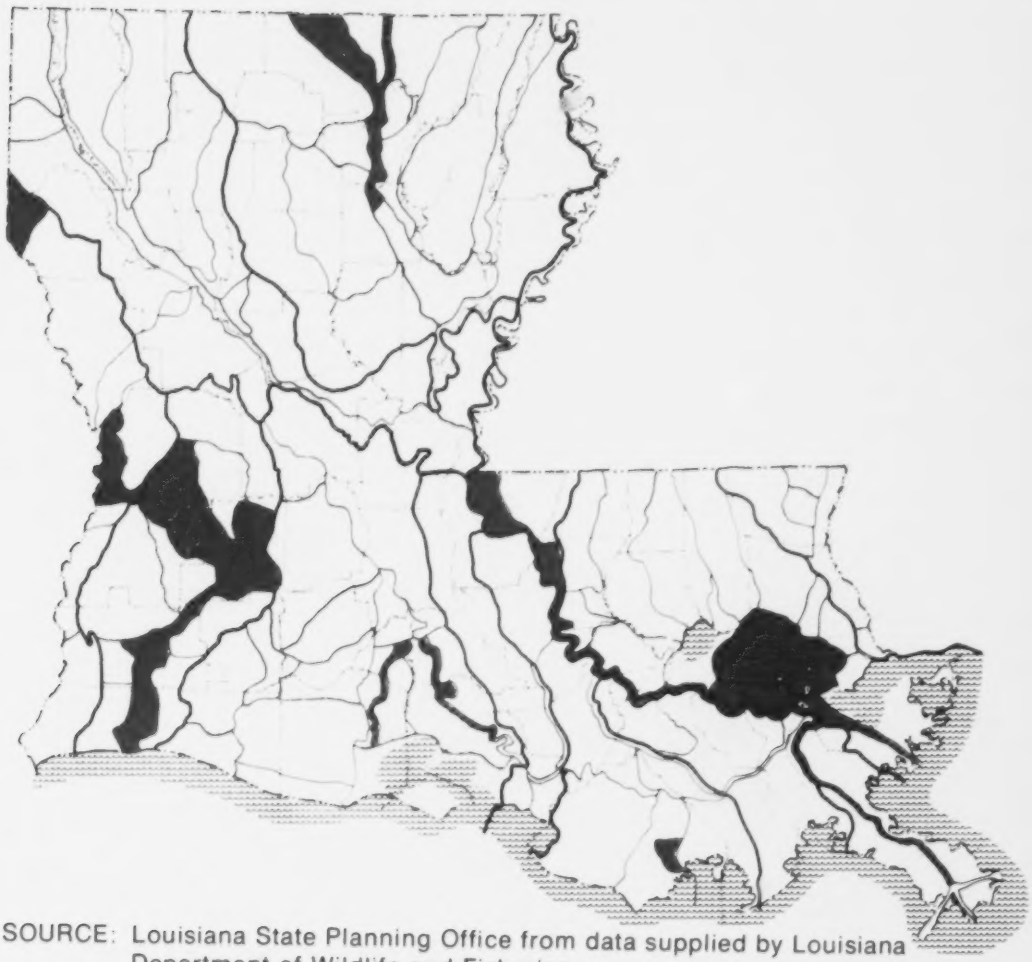
In 1977 following public hearings and intensive review of then existing Louisiana water quality standards, the Stream Control Commission adopted revised Louisiana water quality criteria in an effort to reduce present pollution levels and inhibit or preclude further pollution. The new standards establish limits both for polluting substances and for stream properties such as water pH, dissolved oxygen content, color and temperature. In addition, the commission classified Louisiana surface water bodies as either "effluent limited" or "water quality limited". Effluent limited segments are those that meet acceptable water quality standards; discharges into these streams and lakes must meet existing standards. Water quality limited segments are those that do not meet water quality standards (Figure 5-1); discharges that would further pollute these streams and lakes are not permitted.

According to the 1978 **Louisiana Water Quality Inventory Report,** the quality of Louisiana's surface waters is improving. Realistically, some problems are apparent, and at present, 13 stream segments (of over 100 statewide) are classified as water quality limited. Four of the 13 stream segments exhibit acute problems.

Three stream segments—the Vermilion River, the northernmost portion of the Sabine River and the Ouachita River from the Arkansas State Line to south of Monroe, Louisiana—suffer from low dissolved oxygen levels. Municipal and industrial waste discharges as well as low flow and tidal action account for the Vermilion River problem. Industrial and domestic wastes as well as the influx of low dissolved oxygen level waters from surrounding wetlands detrimentally affect the Sabine River. The low dissolved oxygen level of the Ouachita River can be attributed to industrial plant discharges in Arkansas; waters from the Ouachita River enter Louisiana in a condition that does not meet water quality standards. A fourth major water quality limited segment, the Calcasieu River, exhibits high bacterial counts, bad taste and odor, and low dissolved oxygen levels. High temperatures, the influx of waters from surrounding hardwood swamps, extremely low currents and near stagnant conditions account for the Calcasieu River Problem.

FIGURE 5-1

WATER QUALITY LIMITED SEGMENTS



SOURCE: Louisiana State Planning Office from data supplied by Louisiana Department of Wildlife and Fisheries.

208 Water Quality Management Planning

The State of Louisiana is participating in a federal-state program designed to clean up the nation's surface waters. Mandated by Section 208 of the Federal Water Pollution Control Act of 1972 (Public Law 92-500, the Clean Water Act), the federal program has two primary goals: to attain water quality suitable for fishing and swimming by 1983; and to eliminate the discharge of pollutants into all surface waters by 1985. Termed Section 208 Water Quality Management

Planning, this challenging, comprehensive program has encompassed state and local governments, private industry and citizen groups across the state.

The Louisiana 208 program—designed to coordinate state and local water pollution control activities, waste treatment requirements and permitting procedures—focuses on the control of present and potential water quality problems and addresses both point and nonpoint sources of water pollution. Point source pollutants enter surface waters from a specific point such as a sewer pipe, culvert, or other channel or conduit; nonpoint source pollutants enter surface water bodies as runoff, washoff or seepage from broad areas of land.

For water quality planning purposes the state is divided into 12 major hydrologic units or river basins (Figure 5-2). A major component of the 208 program in Louisiana is the formulation of individual water quality management plans for the basins. Preparation of the basin plans is under the direction of the Louisiana Stream Control Commission with input from the Louisiana Department of Agriculture, the State Planning Office, the Louisiana Soil and Water Conservation Committee, and the Bureau of Environmental Services (Louisiana Department of Health and Human Resources). Basin plans will recommend limits on the amounts and kinds of pollutants allowable in industrial/municipal wastewaters and will recommend best management practices for controlling nonpoint source pollution at a level compatible with water quality plans. In addition, basin plans will provide both cost estimates and implementation schedules for all recommendations.

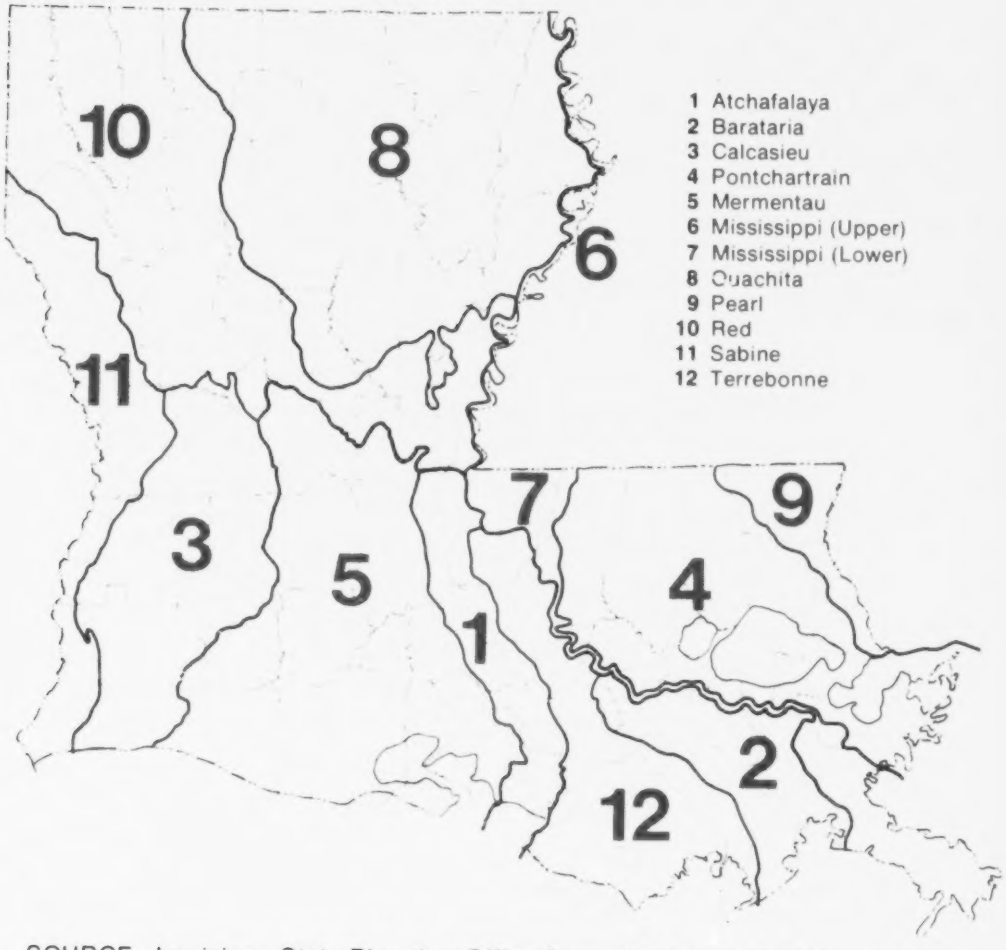
AIR QUALITY

Most substances that enter the atmosphere as a result of man's activities are designated pollutants. Common air pollutants include particulate matter—i.e., dust, fumes, smoke—sulfur dioxide, nitrogen dioxide, carbon monoxide and photochemical oxidants.

State air quality standards, established and enforced by the Louisiana Air Control Commission, are developed in compliance with existing federal regulations. The Federal Clean Air Act (1977) and its subsequent amendments set stringent criteria for states to follow. The Clean Air Act provides for the classification and control of all pollutants in both urban and rural areas and requires all states to submit implementation plans specifying methods and deadlines for meeting air quality standards.

FIGURE 5-2

LOUISIANA WATER QUALITY MANAGEMENT BASINS



SOURCE: Louisiana State Planning Office from data supplied by Louisiana Department of Wildlife and Fisheries.

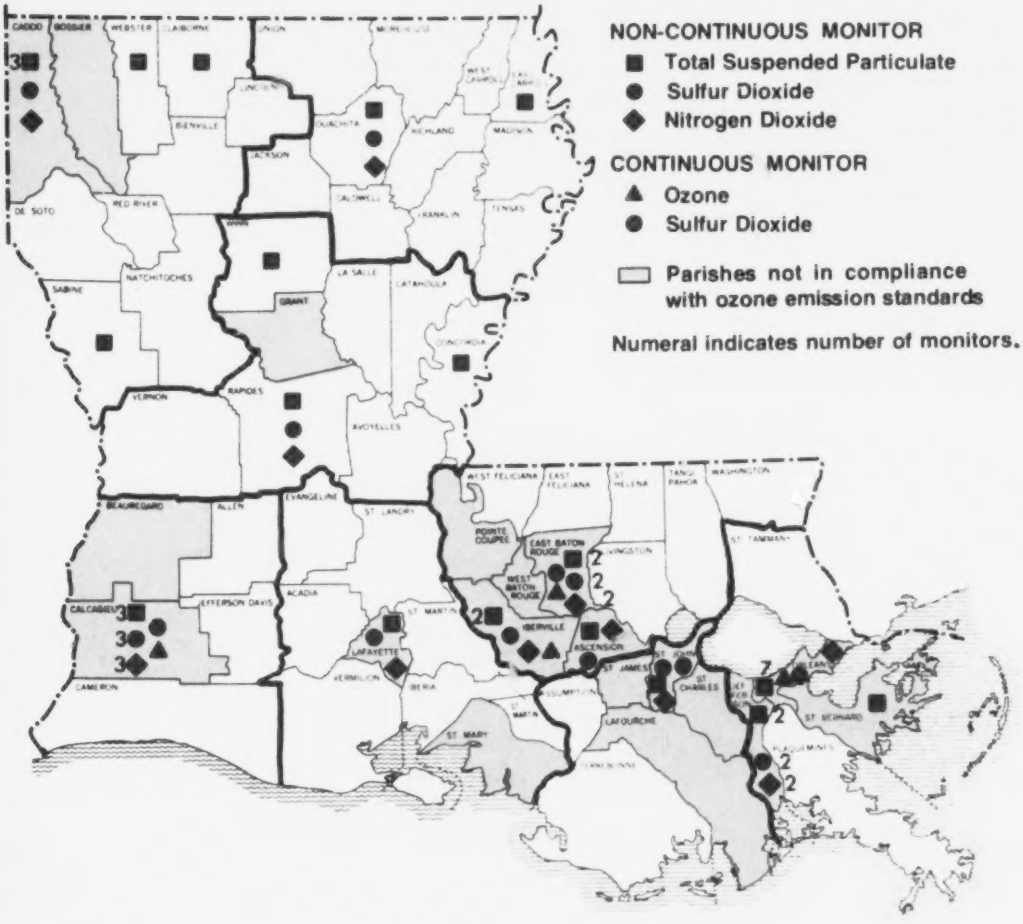
The Louisiana Air Control Commission submitted its proposed implementation plan to the Environmental Protection Agency (EPA) in December 1978 and received final approval in March 1979. All states must submit an acceptable plan by July 1979. If a state fails to present an acceptable plan, EPA is empowered to level sanctions. Moreover, that state will not only forfeit the authority to approve applications for new sources of pollution in "nonattainment" areas that violate standards, but also may lose federal grants and highway funds if an acceptable plan is not submitted. (Nonattainment areas are

those in which the national ambient air standards are exceeded more than once in a year.)

Air quality in Louisiana is monitored for five major types of pollutants: suspended particulates, sulfur dioxide, nitrogen dioxide, carbon monoxide and photochemical oxidants. The state has 35 permanent sampling sites for the collection and analysis of environmental air quality data (Figure 5-3). Six special sites have been established in selected industries on a temporary basis to ensure that required standards are maintained.

FIGURE 5-3

LOUISIANA AIR MONITOR NETWORK

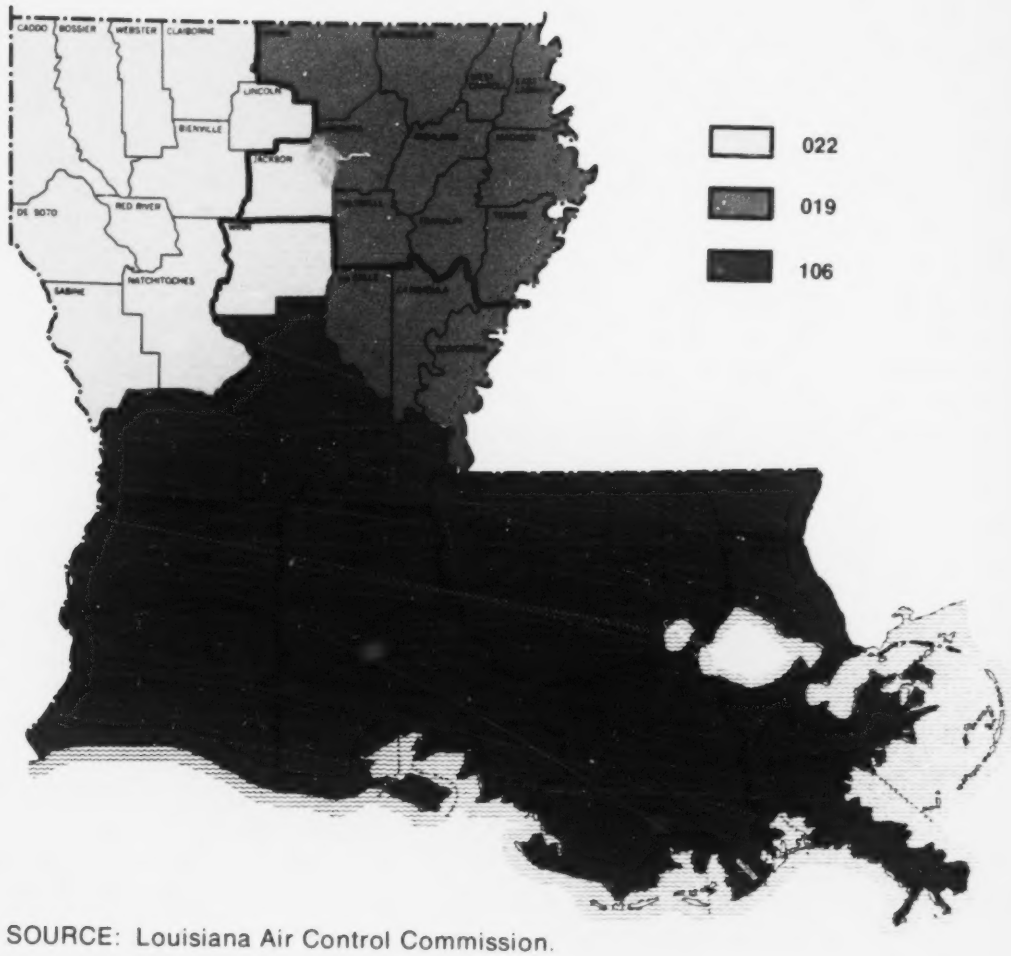


SOURCE: Louisiana Air Control Commission.

Enforcement of air quality standards is on a regional basis with the state divided into three zones (Figure 5-4). Commission activities include the conducting of formal inquiries concerning compliance status, the monitoring of air pollution sources, the processing of violation notices and abatement orders, and the initiation of civil and criminal procedures.

FIGURE 5-4

LOUISIANA AIR QUALITY CONTROL REGIONS



SOURCE: Louisiana Air Control Commission.

With the exception of 19 parishes, Louisiana is in full compliance with all federal air quality regulations (Figure 5-3). The parishes not in compliance were found to be in violation of quality standards for ozone emissions. (Ozone—a triatomic form of oxygen—is a respiratory irritant that forms when sunlight reacts with hydrocarbons and nitrogen oxides.) In January 1979 EPA relaxed the standards for ozone emission from 0.08 parts per million (ppm) to 0.12 ppm. Most of the 19 parishes in noncompliance should be able to meet the 0.12 ppm standard by the federal deadline, December 1982. East Baton Rouge Parish, the state's worst violator of the ozone standard—East Baton Rouge registers a 0.19 ppm level—will have the most difficulty meeting the deadline. The Louisiana Air Control Commission is providing assistance for the 19 parishes in their efforts to meet established air quality regulations.

WASTE DISPOSAL

The Resource Conservation and Recovery Act of 1976 (RCRA) provides for the regulation of the treatment, storage, transportation and disposal of hazardous wastes; the development and implementation of comprehensive solid waste management plans (including the prohibition of continued open dumping); and the development of resource conservation and recovery techniques. The act authorizes funding for the planning and construction of both waste disposal and recycling facilities for municipal governments; however, no funds have been appropriated by Congress.

Overall, RCRA encourages program planning at the regional and state level and proffers opportunities for public participation in the development of all regulations, guidelines and programs under the act. RCRA constituted the major funding source for the development of solid waste and hazardous waste programs in Louisiana's executive level departments of state government in 1978. The act's structured approach to waste disposal should have a positive impact on air and water quality, land use, resource recovery and energy development.

Solid Waste

"Solid waste" is broadly defined as any solid, semisolid, sludge or liquid material that requires disposal. Municipal solid waste (residential, commercial and institutional sources), industrial waste, municipal wastewater sludges, and agricultural and mining wastes

amount to billions of tons yearly of solid waste in the nation. The Resource Conservation and Recovery Act (Public Law 94-580) attests to a commitment at the federal level to ensure an adequate resource recovery and solid waste disposal program for the nation.

Prior to the enactment of RCRA, the Louisiana Department of Health and Human Resources (DHHR) held jurisdiction on all matters relating to solid wastes. In 1972 the department issued its first solid waste regulations—a state sanitary code—and presented the initial proposal for a state solid waste management plan. Following the enactment of RCRA, the department tendered a revised proposal.

At the present time, DHHR continues to retain regulatory authority for solid waste disposal in Louisiana; however, the Governor's Office of Science, Technology and Environmental Policy was given planning authority and responsibility for the development of a comprehensive solid waste management plan satisfying RCRA criteria. The Louisiana plan must require the prohibition of new open dumps; the closing or upgrading of all existing open dumps by 1983; and the utilization of solid wastes for resource recovery or disposal in sanitary landfills or by some other environmentally sound manner.

Hazardous Waste

"Hazardous waste" is defined as any solid waste (broadly defined to include semisolids, sludges and liquids) that because of its makeup or concentration can—when improperly handled or disposed—cause or contribute to an increase in mortality, an irreversible illness or a potentially hazardous environment for humans. Hazardous wastes include reactive, corrosive, ignitable, infectious, radioactive and toxic wastes.

Louisiana, which produces over two billion tons of hazardous wastes annually, has been identified by the Environmental Protection Agency as the fourth largest generator of hazardous wastes in the nation. Act 334 of the 1978 Louisiana Legislature mandated that the Louisiana Department of Natural Resources (DNR) develop and implement a program of hazardous waste management for Louisiana by October 1980. The Louisiana hazardous waste act precisely tracks the federal hazardous waste legislation. Moreover, Act 334 authorizes DNR to assess permit fees to pay for costs of the program.

In 1978 the Department of Natural Resources conducted hearings throughout the state to announce plans for developing the hazardous waste plan and regulatory program required by Act 334 and to seek public participation. A public hearing on draft hazardous

waste regulations was held April 3-5, 1979. Implementation of the hazardous waste program is anticipated by July 1, 1979. Louisiana is leading the states both in the provision of comments and the implementation of regulations on hazardous waste management tied to the federal Resource Conservation and Recovery Act.

The Louisiana Department of Health and Human Resources presently permits five hazardous waste disposal sites. In addition, many on-site disposal facilities for industrial production and manufacturing are located throughout the state.

Waste Disposal by Underground Injection Wells

In deep well injection, fluid wastes—many of which are hazardous—are placed into subsurface geological formations separated from fresh water aquifers by impermeable rock strata. Approximately one-third of all authorized injection wells in the United States are located in Louisiana.

The Office of Conservation of the Louisiana Department of Natural Resources is responsible for the regulation of deep well injection of wastes. Louisiana has several thousand permitted underground injection wells. The vast majority of injection wells in the state are permitted for the disposal of brines associated with oil and gas production. Only 55 of Louisiana's 106 permitted injection wells for industrial wastes are in use (Figure 5-5). Most of the wells are located on industrial sites and are used primarily to dispose of contaminated water from chemical industries. Two of the 55 active wells are operated commercially. The commercial wells are inspected weekly by both the Department of Natural Resources and the Department of Health and Human Resources. The industrial site wells are also monitored; further, quarterly reports on well activities are required by the Department of Natural Resources.

CONCLUSION

In general, the quality of Louisiana's environment—air, water, climate—is good, contributing not only to the physical but also to the economic well-being of the state and its citizens. Louisiana's environment serves as a meaningful inducement for both new industries and individuals to locate in the state. It is critically important, therefore, for the state effectively and rationally to manage all elements

FIGURE 5-5

LOCATION OF ACTIVE INDUSTRIAL INJECTION WELLS

SOURCE: Louisiana Department of Natural Resources.

that affect environmental quality. Any further degradation of Louisiana's environment will result in the loss of potential economic as well as real aesthetic assets. These are losses that no state can afford.

Chapter 6

Health and human services programs are important elements of a state's overall quality of life. In Louisiana such programs are administered by the Department of Health and Human Resources (DHHR), which operates with an annual budget of nearly $1 billion, or about one-fourth of the entire state budget. In Fiscal Year 1977-1978 the total state budget was $3,667,611,789, of which DHHR accounted for $910,695,022.

HEALTH

The health of a state's individual citizens is influenced by many factors, including the availability and the financial and geographic accessibility of health care services. The diverse health programs in Louisiana encompass prevention, diagnosis, treatment, rehabilitation, maintenance and support services. Health indicators such as mortality (death) and morbidity (disease) rates are useful in determining health conditions in a given area.

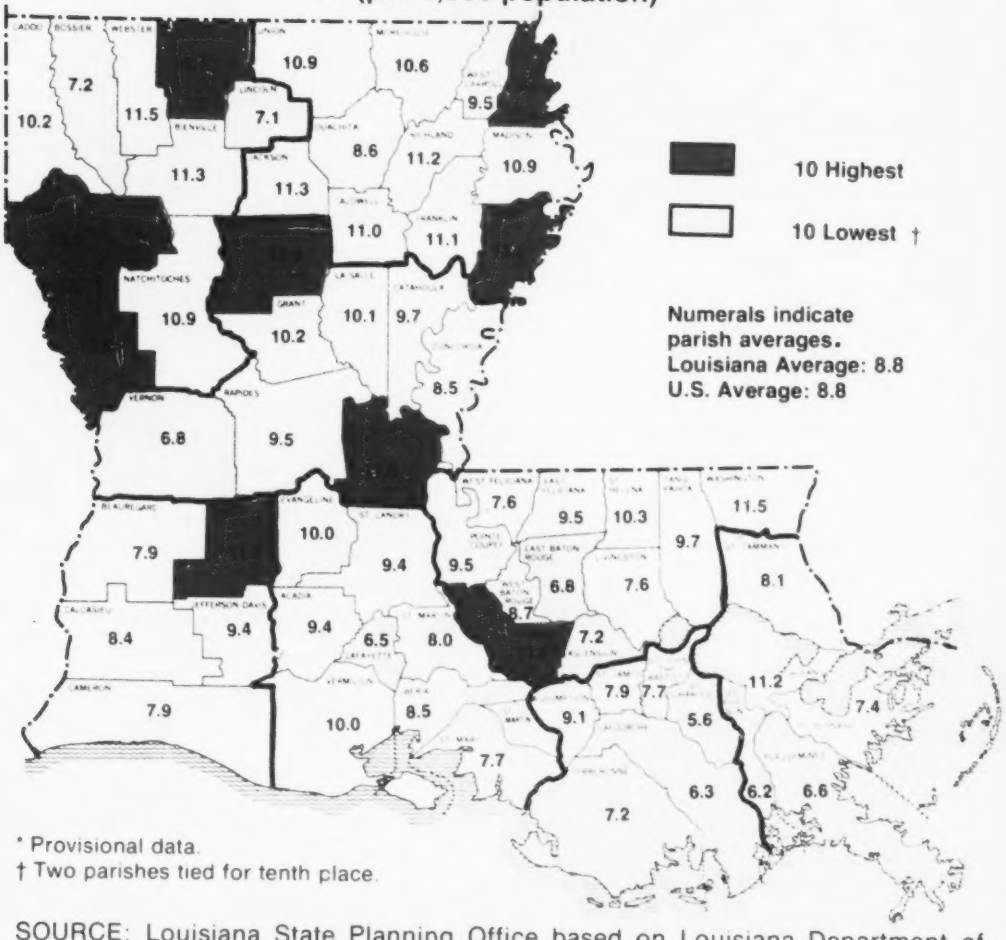
Health Indicators

"Crude death rate" and "crude disease rate" are the most common measures of mortality and morbidity, respectively. "Crude rates" are defined as the number of cases per unit of population in a specific area. Mortality and morbidity are influenced by population characteristics such as age, sex, race and income. These socioeconomic factors should be considered in analyses of significant differences in mortality and morbidity rates among areas.

Mortality Rates

"Crude death rate" is the total number of deaths reported per 1,000 population in a designated area. Figure 6-1 shows the provisional crude death rate by parish for Louisiana in 1978. The rate ranged from a low of 5.6 in St. Charles Parish to a high of 13.9 in

FIGURE 6-1
DEATH RATE: LOUISIANA PARISHES, 1978*
(per 1,000 population)



* Provisional data.
† Two parishes tied for tenth place.

SOURCE: Louisiana State Planning Office based on Louisiana Department of Health and Human Resources, Office of Health Services and Environmental Quality, Public Health Statistics, **Louisiana Vital Statistics Report: Provisional Statistics January-December 1978;** and U.S. Department of Health, Education and Welfare, Public Health Service, National Center for Health Statistics, **Monthly Vital Statistics Report** (January 1979).

Sabine and Tensas parishes. The eleven parishes with the ten lowest rates (ranging from 5.6 to 7.2) were mostly located in southeastern Louisiana, while the highest rates (11.6 to 13.9) were largely in the state's northern section. Louisiana's average crude death rate was 8.8, equal to the provisional national average. Since 1975 both the national and Louisiana rates have remained almost constant at 8.8 to 9.0 (Table 6-1), though parish figures have fluctuated.

"Crude infant death rate", defined as total infant deaths (those under one year of age exclusive of fetal deaths) per 1,000 live births, generally reflects the state of health of both children and mothers. Infant mortality statistics highlight both health problems and inadequacies of the health care delivery system, but must not be used as the sole overall health indicator of a nation, state, parish/county or town.

Nevertheless, Louisiana's unfortunate distinction of having one of the worst infant mortality rates in the nation is cause for great alarm. While the provisional national infant death rate was 13.6 in 1978, Louisiana's was 17.3, ranging from a low of 5.3 in Catahoula Parish to a high of 47.6 in DeSoto Parish; note that these rates are

TABLE 6-1
DEATH RATE FOR THE UNITED STATES, LOUISIANA AND WEST SOUTH CENTRAL STATES, SELECTED YEARS

Area	1960	1965	1970	1973	1974	1975	1976	1977	1978*
United States	9.5	9.4	9.5	9.4	9.2	8.9	8.9	8.8	8.8
Louisiana	9.1	9.1	9.2	9.3	8.9	8.9	9.0	8.8	8.8
West South Central†	8.7	8.6	9.1	9.2	8.9	8.7	8.7	8.4	NA‡

SOURCE: Louisiana State Planning Office based on U.S. Department of Commerce, Bureau of the Census, **Statistical Abstract of the United States 1978;** Louisiana Department of Health and Human Resources, Office of Health Services and Environmental Quality, Public Health Statistics, **Louisiana Vital Statistics Report** (Provisional Statistics January-December 1978) and U.S. Department of Health, Education and Welfare, Public Health Service, National Center for Health Statistics, **Monthly Vital Statistics Report.**

* Provisional data.
† Arkansas, Louisiana, Oklahoma, Texas.
‡ NA indicates data not available.

calculated by place of mother's residence rather than by location of occurrence. While the rate of 17.3 represents a decline over the 1977 rate of 18.1 and the 1976 rate of 17.8, Louisiana's rate has been persistently higher than the national rate (Table 6-2). Average infant death rate by parish for the years 1974 through 1978 is shown in Figure 6-2. Five-year averages are used because, with the relatively low number of infant deaths annually per parish, rates fluctuate markedly from year to year as a result of small changes in number of deaths.

Of the 1,283 infant deaths in Louisiana in 1978, 70 percent (898) involved children under 28 days of age (neonatal). Louisiana's provisional neonatal death rate per 1,000 live births was 12.1 in 1978, compared with the national rate of 9.5.

Infant death rate is highly correlated with race both for the nation and for Louisiana, and viewed from that perspective the rates for the two areas were almost identical in 1978. The infant death rate for whites in Louisiana was 14.3, compared with 14.2 for the nation; for nonwhites the rates were 24.1 for Louisiana and 24.2 for the nation (Figure 6-3).

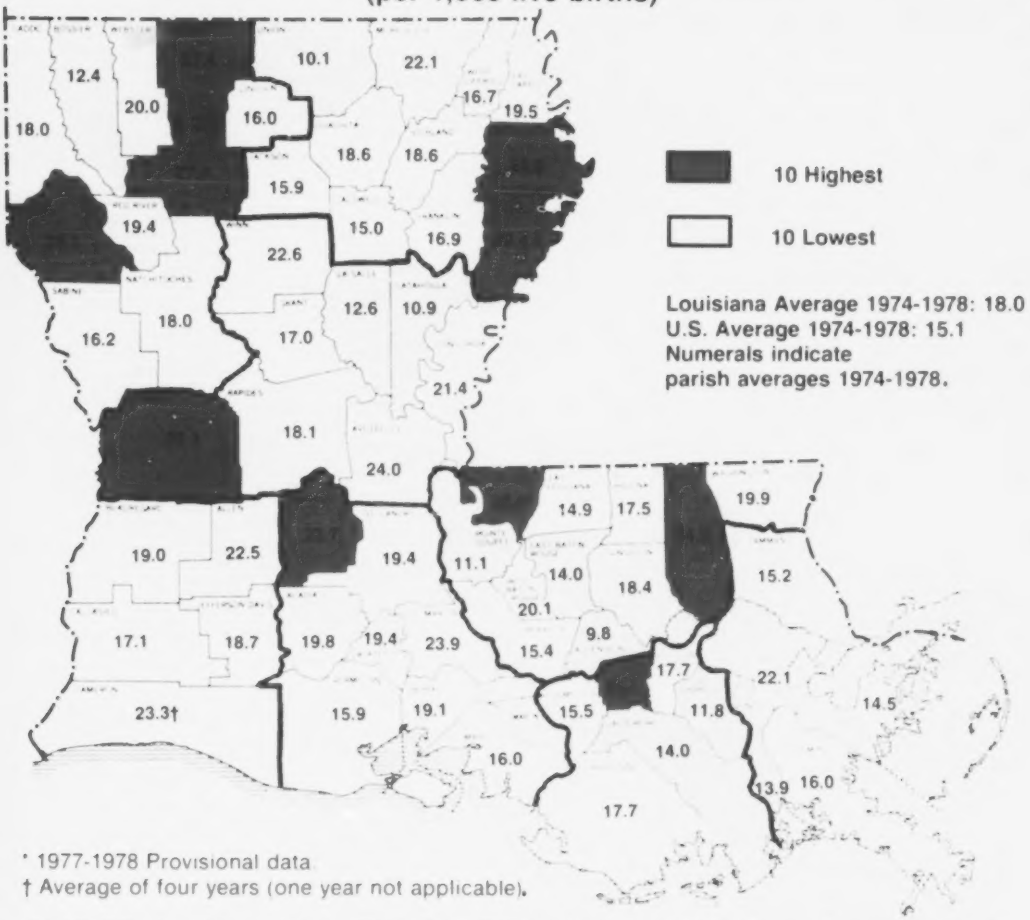
TABLE 6-2
INFANT MORTALITY RATES FOR THE UNITED STATES AND LOUISIANA, SELECTED YEARS

Year	United States	Louisiana
1950	29.2	34.4
1960	26.0	32.0
1970	20.0	24.3
1971	19.1	22.1
1972	18.5	21.0
1973	17.7	20.6
1974	16.7	18.8
1975	16.1	18.2
1976	15.2	17.8
1977	14.0*	18.1
1978	13.6*	17.3*

SOURCE: Louisiana Department of Health and Human Resources, Office of Health Services and Environmental Quality, Public Health Statistics, **Louisiana Vital Statistics Report** (Provisional Statistics January-December 1978).

* Provisional data.

FIGURE 6-2
INFANT MORTALITY: LOUISIANA PARISHES, AVERAGE 1974-1978*
(per 1,000 live births)

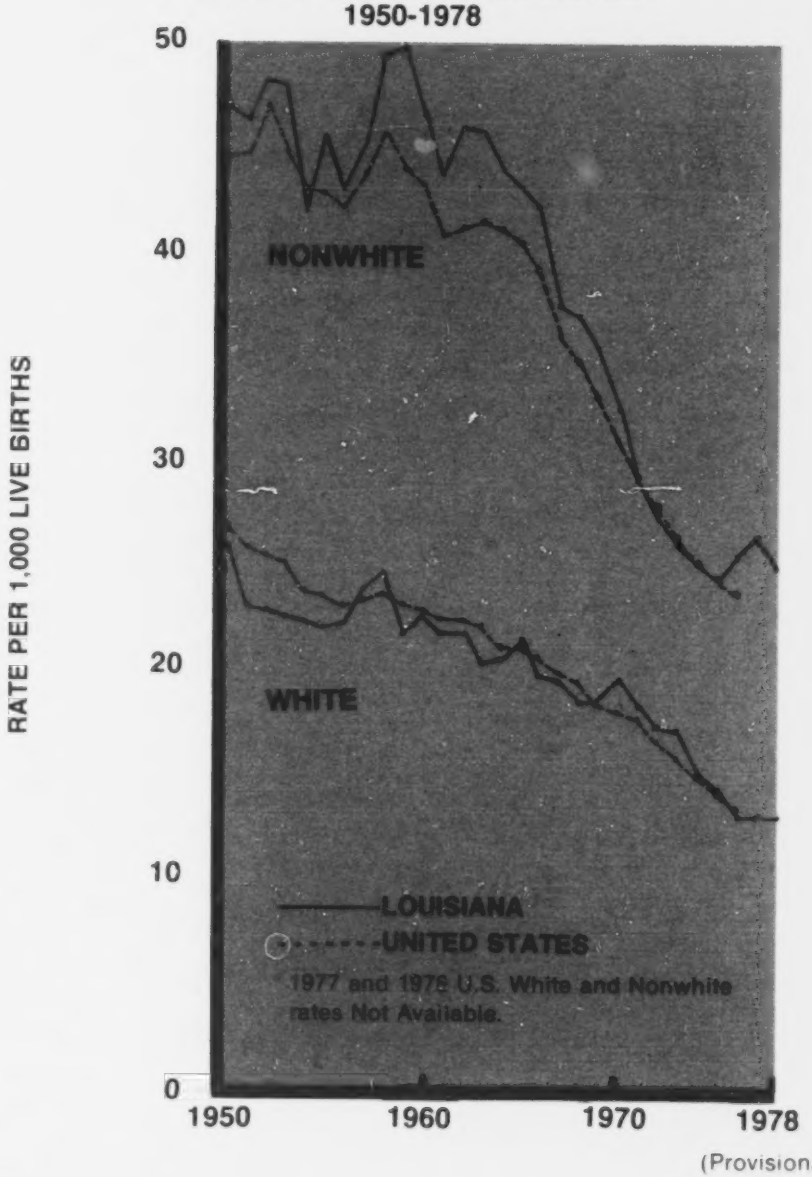


* 1977-1978 Provisional data.
† Average of four years (one year not applicable).

SOURCE: Louisiana State Planning Office, based on Louisiana Department of Health and Human Resources, Office of Health Services and Environmental Quality, Public Health Statistics, **Louisiana Vital Statistics Report** and **Vital Statistics of Louisiana;** and U. S. Department of Health, Education and Welfare, Public Health Service, National Center for Health Statistics, **Monthly Vital Statistics Report.**

The apparent disparity between overall rate and rates for whites and nonwhites in national-state infant mortality rates can be explained by Louisiana's racial composition relative to the United States as a whole, together with concomitant socioeconomic factors. According to 1975 figures (the latest available) nonwhites make up

FIGURE 6-3
INFANT MORTALITY RATES, BY RACE
UNITED STATES* AND LOUISIANA
1950-1978



SOURCE: Louisiana Department of Health and Human Resources, Office of Health Services and Environmental Quality, Public Health Statistics, **Louisiana Vital Statistics Report: Provisional Statistics January-December 1978.**

only 13.1 percent of the national population compared with 29.9 percent in Louisiana. The state's higher proportion of nonwhites, who have a much higher infant mortality rate than whites, skews the overall rate upward compared to the national average.

Morbidity Rates

Morbidity figures are less reliable than those for mortality because not all cases of disease are reported or diagnosed. The "crude disease rate" is the total number of diseases reported per 100,000 population. The most common reportable diseases in Louisiana in 1978 were gonorrhea, 573.0; syphilis, 41.2; hepatitis (type A), 13.8; tuberculosis (pulmonary), 13.6; and rubella, 12.5 (Table 6-3). Cancer is not included among "reportable diseases". Hepatitis and rubella were reported more frequently for whites, while venereal diseases (gonorrhea and syphilis) were reported more frequently for nonwhites.

TABLE 6-3
MOST COMMON REPORTABLE DISEASES, LOUISIANA, 1978*

Disease	Total Cases	Rate per 100,000 Population
Gonorrhea	22,726	573.0
Syphilis	1,633	41.2
Hepatitis, type A	549	13.8
Tuberculosis, pulmonary	538	13.6
Rubella	494	12.5
Measles	385	9.7
Hepatitis, type B	212	5.3
Hepatitis, viral, type unspecified	193	4.9
Salmonellosis†	178	4.5
Meningococcal infections	149	3.8
Shigellosis (dysentery-bacillary)	122	3.1

SOURCE: Louisiana State Planning Office based on Louisiana Department of Health and Human Resources, Office of Health Services and Environmental Quality, Public Health Statistics, **Louisiana Vital Statistics Report** (Provisional Statistics January-December 1978).

* Provisional data.
† Includes paratyphoid fever.

Life Expectancy

The latest available state figures for life expectancy (average 1969-1971) show that Louisiana ranks forty-seventh with 68.8 years, compared with the national average of 70.8 (Table 6-4). Among Louisiana whites the average lifetime is 70.7 years, while for nonwhites it is 64.4. Nationally, the corresponding figures are 71.6 and 65.0. Life expectancy figures for women provide an equally striking comparison: women outlive men among both whites and nonwhites. White women in Louisiana have an average life expectancy of 75.2 years, white men 65.6; for nonwhites the figures are 68.1 years for women and 60.7 for men. The national figures are 75.5 and 67.9 for white women and men, and 69.1 and 61.0 for nonwhite women and men.

Women in Louisiana have an average life expectancy of 72.9 years, compared with 64.9 for men; nationally, women live an average of 74.6 years, men 67.0.

Health Care in Louisiana

Although the U.S. Department of Health, Education and Welfare (HEW) in the October 15th, 1976 **Federal Register** designated 52 Louisiana parishes and portions of the remaining 12 as "medically underserved", several studies attempting to assess effects of medical underservice have failed to establish a clear relationship between availability of medical care and either its utilization or the health status of the population. Medical underservice is determined on the basis of four criteria: ratio of primary care physicians to population, infant mortality rates, percentage of population age 65 or older, and percentage of population with family income below poverty level.

Criteria for several additional indices of health care under the general heading of Health Manpower Shortage Areas (HMSAs) were published by HEW in the **Federal Register** of January 10, 1978. The aim is to identify separately areas with shortages of manpower in primary medical, dental, psychiatric, vision, podiatric, pharmacy and veterinary care—manpower types currently available for placement by the National Health Corps. An important criterion for HMSA qualification is that manpower in contiguous areas be either overutilized, excessively distant or inaccessible to the population under consideration.

Louisiana's three Health Systems Agencies (HSAs) are currently making assessments to determine which areas of the state should be designated HMSAs by HEW.

TABLE 6-4
AVERAGE LIFE EXPECTANCY IN YEARS BY RACE AND SEX FOR THE UNITED STATES AND SELECTED SOUTHERN STATES, 1969-1971

National Rank	State	Total			White			Nonwhite		
		Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female
19	Oklahoma	71.42	67.40	75.70	71.85	67.83	76.15	67.82	63.47	72.25
23	Texas	70.90	67.05	74.99	71.74	67.85	75.88	65.51	61.71	69.47
	United States	70.75	67.04	74.64	71.62	67.94	75.49	64.95	60.98	69.05
27	Arkansas	70.66	66.68	74.97	71.71	67.58	76.26	65.88	62.01	69.67
47	Louisiana	68.76	64.85	72.88	70.70	65.55	75.17	64.40	60.65	68.05
48	Georgia	68.54	64.27	73.01	70.62	66.18	75.38	62.89	58.59	67.10
49	Mississippi	68.09	64.06	72.40	70.50	66.14	75.32	64.03	60.17	67.78
50	South Carolina	67.96	63.85	72.29	70.32	66.11	74.82	62.64	58.33	67.01

SOURCE: U.S. Department of Health, Education and Welfare, National Center for Health Statistics, **U.S. Decennial Life Tables for 1969-1971,** Vol. II, No. 19, "Louisiana State Life Tables: 1969-1971".

Notwithstanding these efforts, some studies seem to cast doubt on the validity of these indicators; a study investigating the effects on public health of the availability of medical care in Rhode Island, for example, concluded that, in terms of planning, increasing the availability of physicians by area is not likely to improve the level of health. Likewise, a study by the Louisiana Division of Health Planning and Development found no relationship between death rates and the distribution of total physicians, general practitioners, nurses or hospital beds for the period 1970 to 1974.

In 1976 Louisiana averaged 141 physicians per 100,000 population, second-highest among the U.S. Bureau of the Census' West South Central states (Arkansas, Louisiana, Oklahoma, Texas), but twenty-eighth nationally (Table 6-5). The national average was 174. The ratio of dentists per 100,000 population in Louisiana was 38, also second in the West South Central district, but forty-second nationally. The national average was 52.

Louisiana has 153 general hospitals (December 1978), including 7 federal, 10 state, 94 local nonprofit, and 42 proprietary hospitals (Table 6-6). Total bed capacity is 20,677. The distribution of hospitals in Louisiana by parish is shown in Figure 6-4.

Louisiana Charity Hospitals

Louisiana maintains a large charity hospital system, in 1978 consisting of 10 general hospitals with a total bed capacity of 3,278 (1,502 in the Charity Hospital at New Orleans) and two special hospitals at Jackson, Louisiana (Table 6-6, Figure 6-5). The latter include Villa Feliciana, the state's only geriatric hospital (748 beds), and Jackson Special Hospital, serving inmates of state correctional institutions (50 beds). in addition, the Bureau of Substance Abuse administers 20 full-time and 23 part-time clinics.

Nine of the general hospitals and the two special hospitals are administered by the Department of Health and Human Resources through its Office of Hospitals and Office of Charity Hospital of Louisiana at New Orleans. The tenth hospital, located in Shreveport, was formerly named the Confederate Memorial Medical Center but is now the Louisiana State University Hospital-Shreveport; it has been administered by the university's medical school since 1976. The South Louisiana Medical Center at Houma is the newest charity hospital, opened September 1978. The Lake Charles Charity Hospital at Lake Charles has also recently undergone a name change; it is now the Dr. Walter Olin Moss Regional Hospital.

TABLE 6-5
RATIO OF PHYSICIANS AND DENTISTS TO POPULATION, UNITED STATES, 1976*
(per 100,000 population)

State or Other Area	Active Physicians, 1976 Total	Rate	Active Dentists, 1976 Total	Rate	State or Other Area	Active Physicians, 1976 Total	Rate	Active Dentists, 1976 Total	Rate
Ala.	4,071	111	1,168	32	Mont.	952	126	414	55
Alaska	472	116	184	52	Nebr.	2,144	138	853	55
Ariz.	4,117	183	1,085	48	Nev.	786	128	307	51
Ark.	2,303	109	668	32	N.H.	1,319	159	428	52
Calif.	47,223	219	13,743	65	N.J.	12,974	177	4,465	61
Colo.	5,087	198	1,488	59	N. Mex.	1,714	146	481	42
Conn.	6,951	224	1,978	64	N.Y.	46,116	126	12,642	70
Del.	905	155	256	44	N.C.	7,591	139	1,867	35
D.C.	4,147	592	644	93	N. Dak.	758	118	279	44
Fla.	14,604	175	3,806	46	Ohio	16,066	150	4,826	45
Ga.	6,794	136	1,894	39	Okla.	3,339	121	1,044	38
Hawaii	1,534	174	530	64	Oreg.	4,017	173	1,547	67
Idaho	871	105	418	51	Pa.	20,394	173	6,093	51
Ill.	19,241	172	5,716	51	R.I.	1,823	195	462	50
Ind.	6,234	117	2,073	39	S.C.	3,484	123	948	34
Iowa	3,292	115	1,293	45	S. Dak.	675	98	298	44
Kans.	3,301	144	1,010	44	Tenn.	6,230	147	1,901	45
Ky.	4,401	128	1,276	38	Tex.	18,421	146	5,043	41
La.	5,457	141	1,449	38	Utah	2,014	163	771	63
Maine	1,455	136	455	43	Vt.	968	203	260	55
Md.	11,160	271	2,277	56	Va.	8,169	162	2,238	46
Mass.	14,169	245	3,868	67	Wash.	6,413	178	2,461	69
Mich.	13,220	145	4,578	50	W. Va.	2,409	131	623	34
Minn.	7,010	177	2,334	59	Wis.	6,491	141	2,526	55
Miss.	2,424	102	694	30	Wyo.	441	113	178	46
Mo.	7,406	155	2,160	45	**U.S. Total**	**368,542**	**174**	**110,000**	**52**

SOURCE: U.S. Department of Commerce, Bureau of the Census, **Statistical Abstract of the United States 1978.**

* Excludes doctors of osteopathy and dentists in federal service, and physicians with addresses unknown.

All citizens are eligible for admission to these hospitals and clinics, but charges are assessed according to ability to pay. For Fiscal Year 1977-1978 the total budget for the nine DHHR general hospitals plus the special hospitals was $141,637,356, and for the University Hospital $23,745,653; 106,399 patients were admitted to the ten charity hospitals. General data for the charity hospitals are given in Table 6-7.

TABLE 6-6
LOUISIANA GENERAL HOSPITAL FACILITIES, 1978

Type	Number	Beds
Federal	7	1,289
State	10	3,371
Local nonprofit*	94	12,395
Proprietary	42	3,622
Total	**153**	**20,677**

SOURCE: Louisiana State Planning Office based on Louisiana Department of Health and Human Resources, **State Medical Facilities Plan** (preliminary draft; scheduled for release March 1980).

* Parish, city, religious or other.

Private Hospitals

In Fiscal Year 1977-1978 Louisiana's 74 private hospitals (nonprofit and proprietary) had a total bed capacity of 10,576 and admitted 426,812 patients. With an average daily census of 7,608, the occupancy rate was 71.9 percent (average daily census divided by number of beds).

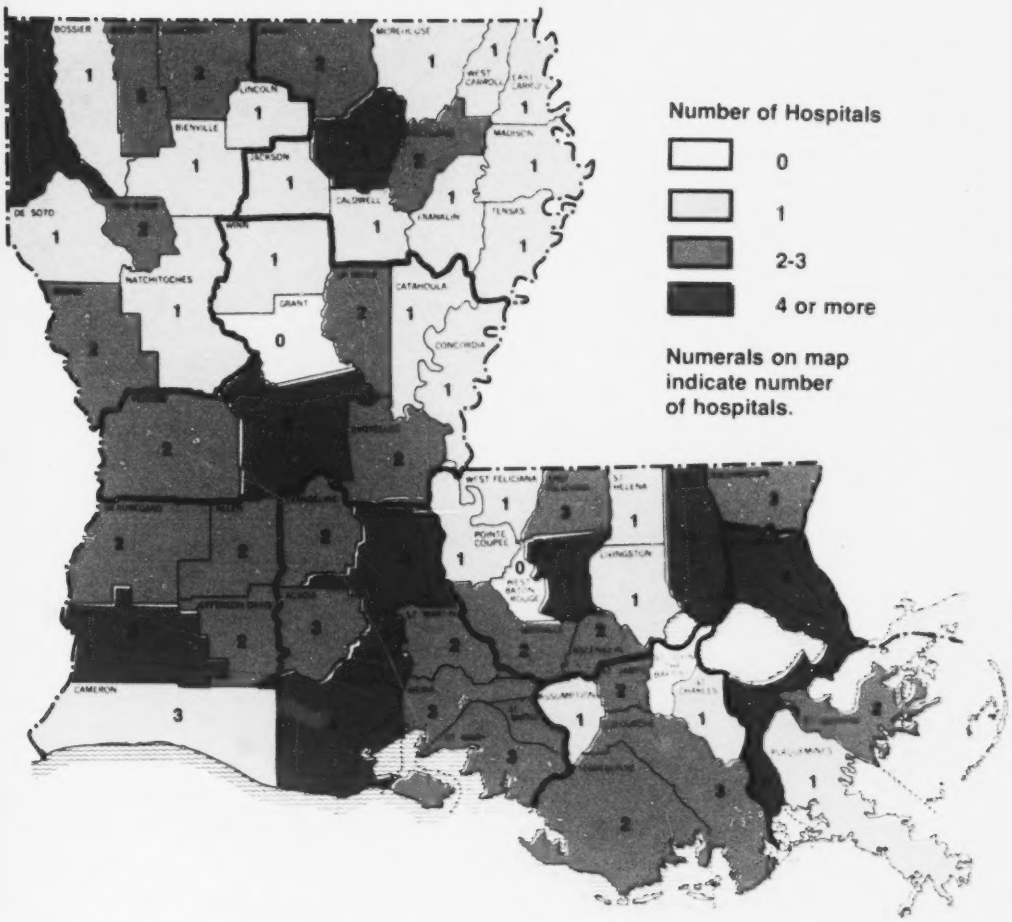
Health Care Costs

The rate of increase of hospital care costs both for the nation and for Louisiana continued to rise through 1976, when the 19.1 percent increase over 1975 nationally was the highest on record (Figure 6-6). In response to the worsening situation, the American Hospital Association proposed the Voluntary Effort program, with strong backing from the Louisiana Hospital Association. The program calls for hospitals to hold down unnecessary cost increases, and during its first year, 1977, the rate of cost increase dropped to 15.6 percent nationally and 15.5 percent in Louisiana. In 1978 the rate declined further to 12.8 percent for the nation and 12.2 percent for Louisiana; the reduced rate of increase in hospital costs constituted a savings to the American consumer of $1.48 billion. National and state hospital associations have adopted a goal of 11.6 percent as the maximum increase for 1979.

Public Health Programs

Public health programs administered by the state through the Office of Health Services and Environmental Quality and supported

FIGURE 6-4
LICENSED HOSPITALS IN LOUISIANA
(February 1979)



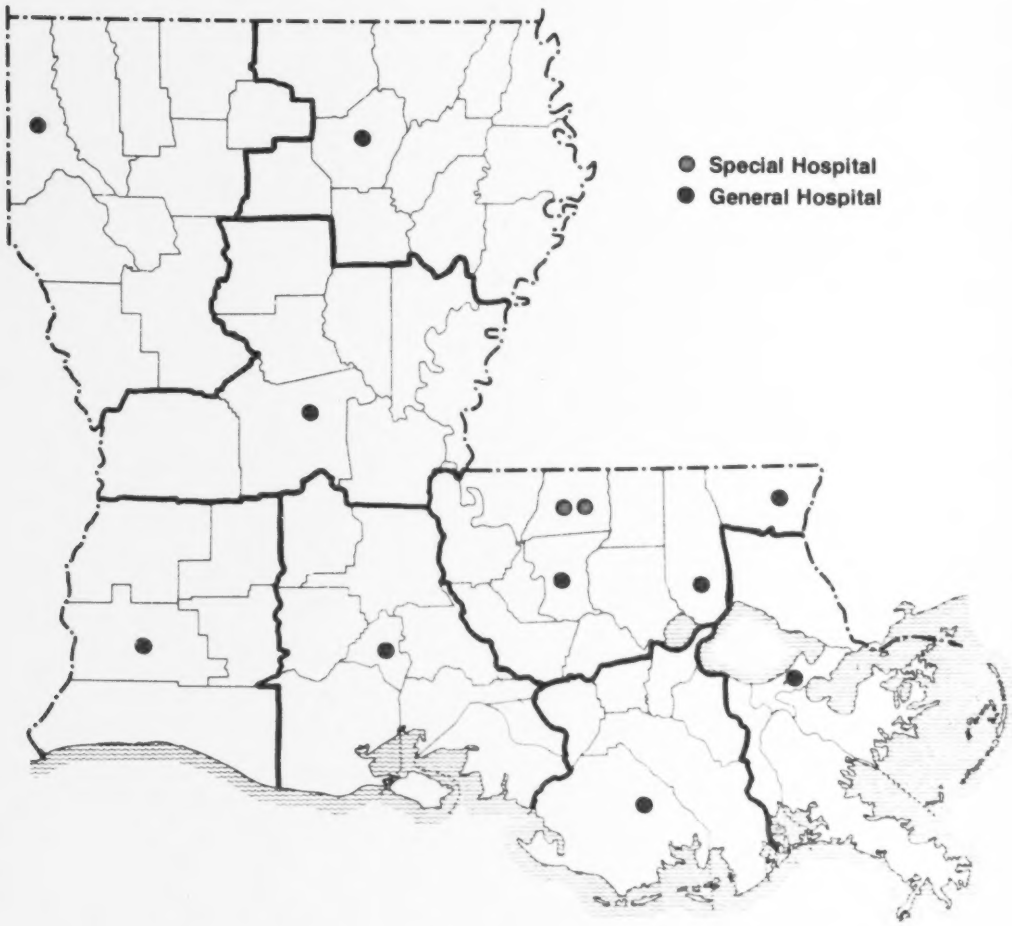
SOURCE: Louisiana State Planning Office based on data from the Louisiana Department of Health and Human Resources, **Directory of Hospitals,** February 1979.

by federal and/or state funds encompass such aspects as nutrition, child health, immunization and sickle cell anemia services.

The Nutritionist Services Section provides training, public information, institutional dietary consultation and nutrition education, and administers the Supplemental Feeding Program for Women, Infants and Children (WIC). The latter, which supplies food to meet basic nutritional needs of participants and collects data on program

FIGURE 6-5

LOCATIONS OF LOUISIANA CHARITY HOSPITALS, 1978



SOURCE: **Louisiana Health Data Book, 1978** and the Louisiana Department of Health and Human Resources **Annual Report for Fiscal Year 1977-78.**

accomplishments, was recently expanded to include 48 parishes and now serves 45,167 persons. The proposed 1978-1979 budget is $15,626,988.

The Early Periodic Screening, Diagnosis and Treatment (EPSDT) child disease control program applies to persons who are under age 21 and who either receive support through Aid to Families with Dependent Children, are Supplemental Security Income recipients, are medically needy, or are Vietnamese, Cuban or Cambodian refugees. During Fiscal Year 1977-1978, 87,801 children were screened at a cost of $7,738,637.

TABLE 6-7
LOUISIANA CHARITY HOSPITALS, FISCAL YEAR 1977-1978

Hospital	Beds*	Inpatient Admissions*	Ave. Daily Census*	Percent Occupancy Rate†	Expenditures
Charity Hospital of Louisiana New Orleans	1,502	46,605	1,014	67.5	$ 81,547,653
E. A. Conway Monroe	183	8,674	113	61.7	6,964,783
Lake Charles Charity (W. O. Moss) Lake Charles	108	4,165	58	53.7	5,221,886
Lallie Kemp Charity Independence	132	4,224	54	40.9	3,719,331
Earl K. Long Baton Rouge	246	10,143	171	69.5	13,046,611
Huey P. Long Alexandria	183	7,521	108	59.0	6,580,153
South Louisiana Medical Center‡ Houma	240	—	—	—	1,305,557
Southwest Louisiana Charity Lafayette	206	6,644	126	61.2	9,185,002
Louisiana State University Hospital Shreveport§	500	15,376	318	63.6	21,441,341
Washington-St. Tammany Bogalusa	72	3,047	37	51.4	2,124,372
Total	**3,372**	**106,399**	**1,999**	**63.8//**	**$151,136,689**

SOURCE: Louisiana State Planning Office based on Louisiana Executive Budget 1979-1980 and unpublished data.

* Excluding newborns.

† Average daily census divided by beds. Due to ward closures for renovation or other reasons, the rates computed may understate actual rates.

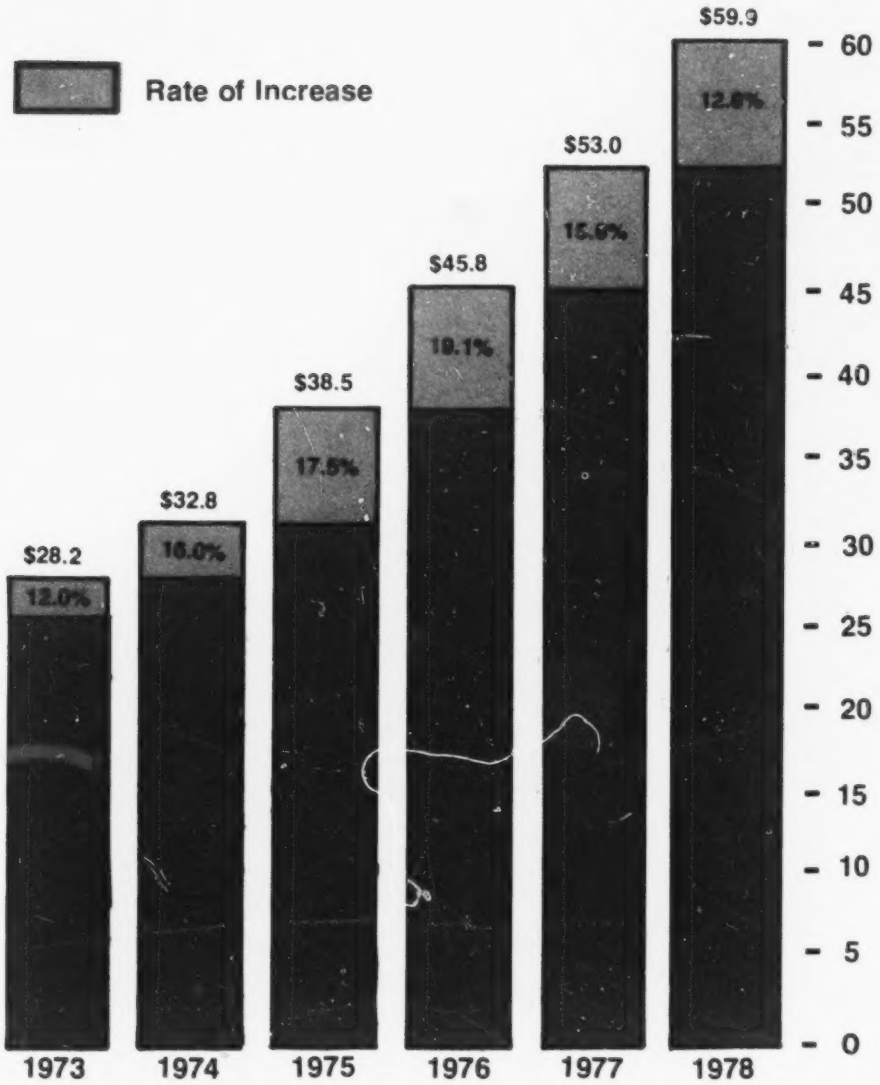
‡ Opened September 1978.

§ Formerly Confederate Memorial.

// Excluding South Louisiana Medical Center beds.

FIGURE 6-6

NATIONAL HOSPITAL COSTS, 1973-1978
(billions of dollars)



SOURCE: Louisiana State Planning Office based on data supplied by the American Hospital Association.

The state administers the federal Immunization Initiative program, which has increased immunizations in state public programs by 21 percent. The program immunized 220,026 persons for DPT, 107,212 for tuberculosis, 292,400 for polio, 75,090 for measles, 65,080 for rubella, and 68,704 for mumps. It is estimated that 95 percent of children entering school have been immunized against these diseases.

Mental Health Services

Through the Office of Mental Health, the state operates 37 community mental health facilities, which, with their outreach services, provide mental health care for 59 of the 64 parishes. Community mental health facilities offer several types of programs, including intensive day treatment of severely disturbed children, specialized services for the elderly and 24-hour emergency services in metropolitan areas.

SERVICES TO SPECIAL GROUPS

The Department of Health and Human Resources administers a variety of programs geared to the needs of specific groups such as the aged, women, the poor, the young and the handicapped, through the Offices of Human Services, Family Services, Youth Services, and Rehabilitation Services. In addition, the Office of Human Services contains a Bureau of Civil Rights.

The Aged

Louisiana has over 500,000 people over the age of sixty, 41 percent of whom have incomes below the poverty level. Current programs of the Office of Human Services' Bureau of Aging include provision of a nursing home ombudsman and legal and social services, promotion of part-time employment opportunities, and improvement of senior center facilities and nutrition. The number of nursing homes in Louisiana rose from 214 in January 1977 to 219 in December 1977, with an increase in bed capacity from 21,606 to 22,541. The occupancy rate remained relatively constant, declining slightly from 92 percent in January to 91 percent in December.

Women

Among state programs for women are the Women and Employment Program, the Displaced Homemakers Program, a talent bank, and rape crisis centers.

The Louisiana Bureau for Women of the Office of Human Services seeks to further legal, economic and educational opportunities for women, improve health services and strengthen the family life of women in the state. The purpose of the talent bank—funded by the Intergovernmental Personnel Act—is to increase the numbers of women on boards and commissions and in high-ranking positions in state government.

The Women and Employment Program focuses on placing women in nontraditional jobs; in Fiscal Year 1977-1978 about 215 women were placed in such jobs. The Displaced Homemakers Program provides counseling, referral, education and job placement services to women over age 35 who have lost their source of income because of divorce or the death of a spouse. Funded through Vocational Education and the Comprehensive Employment and Training Act (CETA), the program has two centers, in New Orleans and Baton Rouge.

The Poor

The Office of Family Services administers both the federal-state Aid to Families with Dependent Children (AFDC) program and the federally sponsored Food Stamp Program.

The AFDC program provides cash payments to families with dependent children deprived of one or both parents when the family's resources are insufficient to meet subsistence needs. In Fiscal Year 1977-1978, 70,000 families were assisted at a cost of $91.2 million.

The Food Stamp Program is designed to give low-income households greater food-purchasing power and thereby to permit them a more nutritious diet. Recipients pay for food stamps at a rate determined by number of persons in the household and net monthly income. In Fiscal Year 1977-1978, 1,440,094 households purchased $196,022,646 worth of coupons for $66,713,396.

The Food Stamp Act of 1977, effective January 1, 1979, eliminated the purchase requirement, so that eligible households will receive the stamps at no cost. Under this act, the recipients receive only the "bonus" coupons, i.e., those in excess of the purchase requirement under the old provisions.

The Young

The Office of Youth Services (OYS) coordinates state efforts to prevent juvenile delinquency, while the Office of Family Services

(OFS) provides temporary or long-term foster care for children determined by the courts to be neglected, abused, or exploited.

Under the OYS statewide Juvenile Intake Services program, OYS staff members determine which cases need not be processed through juvenile court and recommend alternative treatment. Of 5,022 cases in Fiscal Year 1977-1978, 2,284 (45 percent) were diverted. A 1978 program evaluation found that 90 percent of children diverted from the juvenile justice system refrained from further delinquent behavior, and that there was a 42 percent decline in cases involving minor delinquent acts coming to court attention since program inception in September 1975.

In Fiscal Year 1977-1978 the OFS' Foster Care Services had custody of 5,096 children, of whom 80 percent were in foster family homes, 13 percent were in institutions, 2 percent were in adoptive homes, and 5 percent were in other circumstances. The cost of the program was $10,626,249 in Fiscal Year 1977-1978. Twenty-four-hour child protection centers are located in metropolitan areas.

The Handicapped

The Bureau of Handicapped Services (Office of Human Services) and the Office of Rehabilitation Services offer several programs for the handicapped. In addition, the Office of Family Services' General Assistance Program provides a minimum income to dependent persons having a partial or temporary disability.

The Bureau of Handicapped Services assists Louisiana's approximately 500,000 handicapped through employment development, information and referral, and training and advocacy. Estimates show that some 200,000 handicapped persons could be placed in jobs.

Programs administered by the Office of Rehabilitation Services include the Vocational Rehabilitation Program (VR), the Blind Services Program, the Disability Determinations Services Program, the Commission on the Deaf, and the Exceptional Children Program.

The VR program provides diagnosis, evaluation, counseling, medical restoration, hospitalization, eyeglasses, maintenance, training and job placement—all with the goal of making the handicapped individual employable. During Fiscal Year 1977-1978, 43,421 persons were assisted at a cost of $24,869,701; 6,647 persons were rehabilitated, 40.2 percent of whom were classified as severely disabled. Nationally, the figure was 39.8 percent.

Total postrehabilitation weekly earnings of all rehabilitated persons in Louisiana in Fiscal Year 1977-1978, $722,718, were over ten

times the prerehabilitation weekly earnings of $69,202. Average weekly earnings of rehabilitated persons in the United States and Louisiana are compared in Table 6-8.

TABLE 6-8
AVERAGE WEEKLY EARNINGS OF PERSONS REHABILITATED, UNITED STATES AND LOUISIANA, FISCAL YEAR 1977-1978

Weekly Earnings	Percent Nation*	Percent Louisiana*
$100 to $124	17.7	15.7
$125 to $149	8.6	8.6
$150 to $174	7.0	7.8
$175 to $199	3.0	4.3
Over $200	6.5	9.1

SOURCE: Louisiana Department of Health and Human Resources, **Annual Report for 1977-1978.**

* Percent of persons rehabilitated with earnings of at least $100 per week.

The Blind Services Program provided vocational training to 213 persons in Fiscal Year 1977-1978 and found jobs for 226 in such fields as X-ray and laboratory technology, music, teaching and counseling. Courses are offered in personal and social adjustment to help the blind develop sufficient independence to meet the demands of daily living. In Fiscal Year 1977-1978, 559 adults took courses in self-care, handicraft, homemaking techniques, communication and mobility training.

The General Assistance Program of the Office of Family Services is directed toward partially or temporarily disabled adults who cannot be assisted under an existing federal-state program. Financed entirely with state funds, the program aided an average of 3,000 persons per month at a total cost of $1,882,343 in Fiscal Year 1977-1978.

CONCLUSION

Louisiana state government has traditionally tried to provide services to enhance the health and well-being of the citizenry. The state increases the availability and accessibility of health care by supplementing private health services with the state system of charity hospitals and health care programs.

Moreover, the state provides extensive and often specialized services to individual groups, including the handicapped, the poor, women, the elderly and the young.

Through ensuring the well-being of its human resources the state guarantees its own future.

Chapter 7

No other single factor so profoundly influences the economic and social well-being of Louisiana citizens as education. Education—or the lack of it—has become the principal determinant of employment and income prospects. Inadequate education is inexorably linked to such socioeconomic ills as poor health, high crime rates, increased needs and expenditures for public assistance programs, and low public awareness and participation in the democratic process. As a consequence, educators and policymakers alike have initiated concerted efforts to provide quality education in Louisiana.

EDUCATIONAL ATTAINMENT LEVELS IN LOUISIANA

Although there is still a recognized need for betterment, educational attainment levels in Louisiana have improved significantly during the 1970s. For example, 1970 census data indicated that 55.6 percent of all Louisiana heads of household were not high school graduates. That figure fell to 45.5 percent in 1975—still markedly higher than the national figure of 36.6 percent—and can be expected to drop further by 1980.

Table 7-1 depicts 1976 educational attainment levels of persons 18 years of age and over in Louisiana, seven other South Central states and the United States. Louisiana ranked slightly below the United States, Oklahoma and Texas but above the other five South Central states in median school years completed. Louisiana's percentage of high school graduates, 58.3 percent, ranked third among the South Central states, but was still significantly lower than the national figure of 66.6 percent.

TABLE 7-1
YEARS OF SCHOOL COMPLETED AND PERCENT HIGH SCHOOL GRADUATES OF PERSONS 18 YEARS OLD AND OVER IN UNITED STATES AND SOUTH CENTRAL STATES, 1976
(thousands)

State	Persons 18 Years Old and Over	Years of School Completed						Median School Years Completed	Percent High School Graduates				
		Elementary School		High School		College			Total	18-24 Years		25 Years and Over	
		0-4 Years	5-8 Years	1-3 Years	4 Years	1-3 Years	4 or More			Male	Female	Male	Female
U.S.	146,349	4,928	20,621	23,337	52,696	24,382	20,385	12.5	66.6	78.2	79.7	64.1	63.5
La.	2,459	214	418	395	806	344	283	12.3	58.3	72.9	76.1	55.0	53.0
Okla.	1,875	54	291	300	686	324	220	12.4	65.6	82.5	82.6	62.5	61.0
Tex.	8,292	497	1,055	1,393	2,771	1,444	1,132	12.4	64.5	74.5	75.6	63.8	59.7
Ark.	1,473	88	280	277	519	175	134	12.2	56.2	69.0	73.0	54.1	52.5
Ky.	2,307	132	548	397	728	270	231	12.1	53.3	72.1	69.1	49.1	49.9
Tenn.	2,921	187	621	508	906	392	307	12.2	54.9	70.0	73.7	51.8	50.7
Ala.	2,442	167	431	489	802	303	251	12.2	55.5	60.8	73.2	52.9	53.5
Miss.	1,527	121	300	307	417	207	175	12.1	52.3	64.0	68.7	47.2	50.6

SOURCE: U.S. Department of Commerce, Bureau of the Census, **Statistical Abstract of the United States, 1978.**

High illiteracy rates have plagued Louisiana for decades. Since 1950 Louisiana has maintained the dubious distinction of possessing the highest illiteracy rate in the nation. The most recent data on illiteracy rates for the adult population—figures from the 1970 census—show a national rate of 1.2 percent and a Louisiana rate of 2.8 percent. Moreover, 13.1 percent of the Louisiana adult population was classified as "functionally illiterate" or lacking a fifth grade education. It should be noted that the illiteracy rate in Louisiana has decreased with each successive census since 1940; thus, it is probable that the 1980 census will also reveal a reduction in the state's illiteracy rate. (The full implications of the illiteracy problem were analyzed by Public Affairs Research Council of Louisiana, Inc. [PAR] in a February 1978 publication entitled **The Impact of Illiteracy in Louisiana**.)

ELEMENTARY AND SECONDARY EDUCATION

Louisiana currently has 66 basic educational administrative units (operating school districts). In 1976-1977 there were 1,486 public schools of all types and 447 nonpublic schools of all types operating in Louisiana. This represents an increase of nine public schools and a decrease of two nonpublic schools from 1975-1976.

Enrollment and Attendance

Pupil registration for public and nonpublic elementary and secondary schools in Louisiana totaled approximately 922,000 for 1976-1977. Public school registrations accounted for 83.5 percent of total enrollments, compared with a national average of 89.3 percent. Enrollment for public and nonpublic schools during 1977-1978 was approximately 915,000; projected enrollment for 1978-1979 equaled 882,000 (Table 7-2).

Louisiana experienced a 6.1 percent decrease in total school enrollment between 1971 and 1976—due largely to an overall decline in the state's birth rate since 1960. A small portion of the decrease can be attributed to the out-migration of school-age population; between 1970 and 1975 Louisiana sustained a net loss of 500 children or 0.1 percent. Only 11 other states—and no other southern state—experienced such losses. Projections by both the National Center for Education Statistics and the Louisiana Board of Regents indicate that declining school enrollments will continue during the next five years. (The consequences of this decline in school enrollments were analyzed by PAR in its publication of December 1978, entitled **Impact of Declining School Enrollments: Past, Present and Future**.)

TABLE 7-2
TREND IN LOUISIANA SCHOOL ENROLLMENTS*, ACTUAL AND PROJECTED, 1969-1970 to 1982-1983
(thousands)

School Year	Public			Private			Public and Private		
	Grades 1-8	Grades 9-12	Grades 1-12†	Grades 1-8	Grades 9-12	Grades 1-12†	Grades 1-8†	Grades 9-12†	Grades 1-12†
Actual:‡									
1969-1970	613	233	847	110	33	143	723	267	990
1970-1971	598	232	830	117	38	155	715	270	985
1971-1972	591	237	828	111	39	150	702	276	978
1972-1973	579	241	821	108	39	147	687	280	967
1973-1974	564	245	809	106	39	145	670	284	954
1974-1975	545	245	790	104	39	143	649	284	933
1975-1976	536	251	786	104	40	143	639	291	930
1976-1977	526	253	779	103	40	143	629	293	922
1977-1978	522	252	774	102	40	141	624	291	915
Projected:§									
1978-1979	493	250	743	99	40	139	592	290	882
1979-1980	480	244	725	97	39	136	577	283	860
1980-1981	474	235	708	96	38	134	570	273	843
1981-1982	472	225	697	95	37	132	567	262	829
1982-1983	476	216	691	95	37	131	570	252	822

SOURCE: Public Affairs Research Council of Louisiana, Inc., **Impact of Declining School Enrollments: Past, Present and Future**, PAR Analysis Number 233, December 1978.

* Registration for the year, based on first time registration in Louisiana.
† May not total exactly due to rounding.
‡ Actual: Louisiana Department of Education, **Annual Report**, annual series. 1977-1978 data unpublished.
§ Projected: Louisiana Board of Regents. Data computed June 11, 1978.

Average daily attendance in Louisiana's public schools has ranged between 91 percent and 93.3 percent during the period 1951-1977. In 1976-1977 the average daily attendance was 92.2 percent. During 1977-1978 Louisiana ranked nineteenth among the states in average daily attendance.

Dropout rates in Louisiana showed a steady increase from 1966-1967 to 1971-1972; however, that trend was reversed in 1972-1973 and has continued to decline since that date (Table 7-3). During 1976-1977, 17,455 students (1.78 percent of average daily membership) dropped out of Louisiana's public and nonpublic schools. Only 233 of this number reentered school during that session—resulting in a net loss of 17,222 students. The dropout rate for black students was higher than for white students. While black students comprised approximately 36 percent of total enrollment in 1976-1977, they accounted for 43.2 percent of dropouts; the black dropout rate as a percentage of average daily membership was 2.12, as compared to a white dropout rate of 1.59 and a total dropout rate of 1.78. Based on 1975 comparisons, parishes with the highest dropout rates were Franklin, Assumption, Grant, St. James and St. Helena.

Pupil-Teacher Ratio

"Pupil-teacher ratio" is defined as the average number of pupils per teacher. As shown in Table 7-4, the pupil-teacher ratio in Louisiana public schools has shown a steady reduction since 1969-1970. In 1976-1977 the ratio of pupils-to-teachers in Louisiana public schools was 20.7. However, this figure was slightly higher than the national average of 20.3, and twentieth highest among all the states.

In contrast, figures for 1976-1977 indicated that the ratio of pupils-to-teachers in Louisiana nonpublic schools was 17.8—with a ratio of 21.3 in grades 1-8 and 13.1 in grades 9-12. Figures for determining Louisiana's national ranking for pupil-teacher ratios in nonpublic schools are not available.

High School Graduate Trends

The National Education Association (NEA) ranked Louisiana twenty-eighth among the states in percent change in number of public high school graduates between 1971-1972 and 1976-1977. During that period the number of public high school graduates in Louisiana increased 5.8 percent, just below the national average of 6 percent.

TABLE 7-3
TREND IN LOUISIANA SCHOOL DROPOUTS, PUBLIC AND PRIVATE SCHOOLS 1966-1967 THROUGH 1976-1977 SCHOOL YEAR

School Year†	Total	White	Percent of Total	Black	Percent of Total	Dropouts as Percent ADM* White	Black	Total
1966-1967	15,628	8,300	53.1	7,328	46.9	1.34	2.13	1.62
1967-1968	15,902	8,356	52.5	7,546	47.5	1.33	2.17	1.63
1968-1969	17,195	9,112	53.0	8,083	47.0	1.43	2.28	1.73
1969-1970	18,687	9,943	53.2	8,744	46.8	1.55	2.45	1.87
1970-1971	18,941	9,493	50.1	9,448	49.9	1.48	2.64	1.89
1971-1972	18,678	9,725	52.1	8,953	47.9	1.53	2.50	1.88
1972-1973	18,670	10,231	54.8	8,439	45.2	1.61	[illegible]34	1.87
1973-1974	19,779	10,770	54.4	9,009	45.6	1.72	2.[illegible]0	2.01
1974-1975	18,310	10,126	55.3	8,184	44.7	1.62	2.29	1.86
1976-1977	17,455	9,910	56.8	7,545	43.2	1.59	2.12	1.78

SOURCE: Public Affairs Research Council of Louisiana, Inc., **The Impact of Illiteracy in Louisiana**, PAR Analysis Number 228, February 1978, citing Louisiana State Department of Education, Child Welfare and Attendance Division, for school dropout data (unpublished from reports of visiting teachers); Louisiana State Department of Education, **Annual Reports** for ADM (average daily membership) data.

* ADM = Average daily membership. (Average of pupils belonging, present and absent, when schools are in session.)
† 1975-1976 school dropout data not available.

TABLE 7-4
TREND IN RATIO OF PUPILS* TO TEACHERS† IN LOUISIANA PUBLIC SCHOOLS 1969-1970 to 1977-1978

School Year	Elementary (Grades 1-8)			Secondary (Grades 9-12)			Total, Elementary and Secondary (Grades 1-12)		
	Pupils	Teachers	Ratio	Pupils	Teachers	Ratio	Pupils	Teachers	Ratio
1969-1970	613,490	19,590	31.3	233,393	16,989	13.7	846,883	36,577	23.2
1970-1971	597,978	19,652	30.4	232,008	17,151	13.5	829,986	36,803	22.6
1971-1972	590,898	19,816	29.8	237,136	17,546	13.6	828,034	37,362	22.2
1972-1973	579,336	18,840	30.8	241,319	18,285	13.2	820,655	37,125	22.1
1973-1974	563,810	19,453	29.0	245,115	17,910	13.7	808,925	37,363	21.6
1974-1975	545,179	19,240	28.3	244,985	17,898	13.7	790,164	37,138	21.3
1975-1976	535,607	19,550	27.4	250,829	18,405	13.6	786,436	37,955	20.7
1976-1977	525,838	19,154	27.4	253,498	18,539	13.7	779,336	37,693	20.7
1977-1978	521,962	19,062	27.4	251,895	18,646	13.5	773,857	37,708	20.5

SOURCE: Public Affairs Research Council of Louisiana, Inc., **Impact of Declining School Enrollments: Past, Present and Future**, PAR Analysis Number 233, December 1978, citing Louisiana Department of Education, **Annual Report** (series); data for 1977-1978 unpublished.

* Annual registration in regular classes, excluding students in kindergarten, postgraduate and special education self-contained classes.

† Regular classroom teachers, excluding principals, kindergarten and special education teachers. Does include assistant principals, counselors and librarians.

The total number of high school graduates in Louisiana during 1976-1977 was 56,974 (Table 7-5). Public schools accounted for 48,421 graduates; nonpublic schools, for 8,553. The NEA estimated that Louisiana public high school graduates would decrease to 47,000 by 1978-1979; NEA did not provide estimates for nonpublic high school graduates.

The achievement levels of Louisiana graduates, as measured by American College Test (ACT) scores and high school grade point averages, are contradictory. Although high school averages are improving, ACT scores are declining. The mean high school grade point average of students taking the ACT in Louisiana rose from 2.73 in 1972-1973 to 2.83 in 1976-1977; however, the mean composite ACT score for Louisiana declined from 17.8 in 1972-1973 to 16.7 in 1976-1977. It should be noted that this situation is not a phenomenon restricted to Louisiana; similar contradictions have been recorded nationally.

TABLE 7-5
NUMBER OF HIGH SCHOOL GRADUATES WITH PERCENT INCREASE OR DECREASE OVER PREVIOUS YEAR, PUBLIC AND NONPUBLIC, 1967-1977

	1967-1968*	1969-1970*	1971-1972*	1973-1974*	1975-1976*	1976-1977*
Public						
Graduates	41,797	43,641	45,563	46,808	47,446	48,421
% Change	3.19	– .55	2.51	2.41	– .51	2.05
Nonpublic						
Graduates	6,653	7,210	8,193	8,390	8,331	8,553
% Change	1.12	7.16	3.46	3.57	– 1.14	2.66
Public and Nonpublic						
Graduates	48,450	50,851	53,756	55,198	55,777	56,974
% Change	2.91	.47	2.66	2.59	– .61	2.14

SOURCE: Louisiana Department of Education, **One Hundred Twenty-Eighth Annual Report for the Session 1976-1977.**

* Graduates previous summer and midterm included.

Instructional Personnel

Statistics imply that the "average" teacher in Louisiana's public school system is white, female, has a bachelor's degree and 3-12 years of experience, and earns approximately $13,935 per year.

The Louisiana Department of Education reported a total of 43,392 public classroom teachers (including kindergarten, regular and special elementary, and regular and special high school teachers) in 1976-1977. Of this number, 28,241 were white and 15,150 were black; 32,804 were women and 10,587 were men.

For 1976-1977 the Department of Education indicated a total of 1,473 principals in Louisiana public schools, of whom 1,059 were white and 414 were black; 1,239 were men and 234 were women.

Professional Training and Experience

Table 7-6 indicates that professional training of Louisiana public school instructional personnel (including both teachers and principals) improved steadily during the period from 1966 to 1977. Nearly all teachers and principals (99.3 percent) held at least a bachelor's degree and approximately 38.5 percent held a master's degree or better in 1976-1977. Over 50 percent of principals held at least a master's degree plus 30 hours of graduate study.

The number of probationary teachers—those with 0-2 years of experience—declined between 1966 and 1977 (Table 7-7). The number of teachers with 3-12 years of experience increased during that period; yet the most experienced group of teachers—those with 13 or more years—displayed an overall decrease. (It should be noted that the decline in the number of teachers with 13 or more years of experience halted in 1975-1976, and a small increase in this category was recorded in 1976-1977.)

Salaries

Over the decade spanning 1967-1968 to 1977-1978, average annual salaries for Louisiana public school teachers rose 106.2 percent—the sixth highest increase in the nation. Between 1967-1968 and 1976-1977, average annual salaries for public school teachers in Louisiana rose from $6,757 to $10,895. In 1976-1977 NEA ranked Louisiana thirty-first among the states in average teacher salaries. Act 3 of the 1977 Special Legislative Session mandated an annual increase of $1,500 for every public school teacher; Act 329 of the 1978 Regular Legislative Session amended the minimum salary schedule to reflect a like increase. As a result, Louisiana's ranking among the states rose to nineteenth in 1977-1978; nonetheless, Louisiana's estimated average annual salary of $13,935 remained $309 below the national mean. However, none of the states ranking above Louisiana in 1977-1978 was a southern state (Table 7-8). Louisiana had the highest estimated

TABLE 7-6
PROFESSIONAL TRAINING OF LOUISIANA PUBLIC SCHOOL INSTRUCTIONAL PERSONNEL
1967-1977

Professional Training	1967-1968		1969-1970		1971-1972		1973-1974		1975-1976		1976-1977	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Less than one year college	88.0	.23	113.0	.28	80.0	.19	106.0	.25	154.8	.35	82.7	.18
One year college	78.0	.21	77.0	.19	61.0	.15	47.0	.11	42.0	.09	23.0	.05
Two years college	593.0	1.57	507.4	1.27	375.8	.91	164.0	.39	95.5	.22	74.0	.16
Three years colleg.	1,031.4	2.73	932.6	2.34	664.0	1.61	432.0	1.02	257.4	.58	137.0	.30
Bachelor's Degree	26,761.3	70.81	26,671.5	69.30	28,072.1	67.97	27,588.0	65.32	27,766.7	62.32	27,245.9	60.73
Master's Degree	7,932.8	20.99	8,322.9	20.85	8,704.8	21.07	9,523.7	22.55	10,658.4	23.93	11,169.9	24.90
Master's Degree plus 30 hrs. graduate study	1,286.0	3.40	2,248.0	5.63	3,196.0	7.74	4,130.0	9.78	5,219.0	11.71	5,714.5	12.74
Specialist in Education	4.0	.01	26.0	.07	104.0	.25	161.0	.38	248.0	.56	290.0	.65
Ph.D. or Ed.D. Degree	17.0	.05	29.0	.07	45.0	.11	83.0	.20	111.0	.25	128.0	.29
Total	37,791.5	100.00	39,927.4	100.00	41,302.7	100.00	42,234.7	100.00	44,552.8	100.00	44,865.0	100.00
Total teachers and principals with less than four years training	1,790.4	4.74	1,630.0	4.08	1,180.8	2.86	749.0	1.77	549.7	1.23	316.7	.71
Total teachers and principals with four or more years training	36,001.1	95.26	38,297.4	95.92	40,121.9	97.14	41,485.7	98.23	44,003.1	98.77	44,548.3	99.29
Total	37,791.5	100.00	39,927.4	100.00	41,302.7	100.00	42,234.7	100.00	44,552.8	100.00	44,865.0	100.00

SOURCE: Louisiana Department of Education, **One Hundred Twenty-Eighth Annual Report for the Session 1976-1977.**

TABLE 7-7
TREND IN YEARS OF EXPERIENCE, LOUISIANA PUBLIC SCHOOL TEACHERS* AND PRINCIPALS 1966-1967 THROUGH 1976-1977

School Year	Percent of Total†			
	0-2 Years	3-7 Years	8-12 Years	13 or More Years
1966-1967	17.0	23.5	17.5	42.1
1967-1968	17.5	23.8	17.5	41.1
1968-1969	18.8	24.3	17.0	39.9
1969-1970	19.3	24.3	17.0	39.4
1970-1971	19.4	24.6	17.2	38.7
1971-1972	19.0	25.3	17.4	38.4
1972-1973	17.2	26.4	18.3	38.2
1973-1974	16.8	27.3	18.6	37.4
1974-1975	15.9	27.6	19.4	37.2
1975-1976	15.0	28.0	19.8	37.2
1976-1977	14.4	27.7	20.2	37.7

SOURCE: Public Affairs Research Council of Louisiana, Inc., **Impact of Declining School Enrollments: Past, Present and Future.**

* Teachers include kindergarten and special education teachers. Also includes assistant principals, counselors and librarians.
† May not total 100 percent due to rounding.

average salary in the South—$992 more than the next highest southern state, North Carolina, and $1,115 more than the next highest Gulf South state, Texas. (It should be noted that teacher salaries vary within the state, since some parishes supplement state standard pay scales with local funds.)

Salaries for all instructional personnel in Louisiana public schools (including principals, assistant principals, coaches, special education teachers, librarians, and guidance counselors) averaged $11,096 in 1976-1977. NEA rankings placed Louisiana thirty-sixth for that year. However, Louisiana rose to twenty-second in 1977-1978, with an NEA estimated average annual salary of $14,161 for instructional staff. This figure was $675 below the national average but highest among both southern states and Gulf South states.

TABLE 7-8
ESTIMATED AVERAGE SALARIES OF PUBLIC SCHOOL TEACHERS, 1977-1978

Rank	State	Average Salary	Rank	State	Average Salary
1.	Alaska	$22,397	26.	Utah	13,111
2.	New York	18,000	27.	North Carolina	12,943
3.	Hawaii	17,506	28.	Montana	12,927
4.	Michigan	17,464	29.	Virginia	12,850
5.	California	17,370	30.	Texas	12,820
6.	Washington	16,189	31.	New Mexico	12,755
7.	Maryland	15,808	32.	Georgia	12,170
8.	New Jersey	15,425	33.	Missouri	12,147
9.	Massachusetts	15,200	34.	Kansas	12,070
10.	Illinois	15,158	35.	West Virginia	12,046
11.	Rhode Island	15,146	36.	Tennessee	11,943
12.	Minnesota	14,871	37.	Alabama	11,797
13.	Connecticut	14,538	38.	Nebraska	11,792
14.	Arizona	14,430	39.	Idaho	11,724
15.	Pennsylvania	14,350	40.	Kentucky	11,700
UNITED STATES MEAN		**14,244**	41.	Maine	11,671
16.	Nevada	14,148	42.	Oklahoma	11,420
17.	Colorado	14,000	43.	North Dakota	11,329
	Oregon	14,000	44.	South Carolina	11,312
19.	Louisiana	13,935	45.	Vermont	11,290
20.	Delaware	13,736	46.	Florida	11,243
21.	Wisconsin	13,700	47.	New Hampshire	11,100
22.	Indiana	13,590	48.	South Dakota	10,997
23.	Iowa	13,402	49.	Mississippi	10,500
24.	Ohio	13,325	50.	Arkansas	10,026
25.	Wyoming	13,281			

SOURCE: National Education Association, **Rankings of the States, 1978.**

Revenues and Expenditures

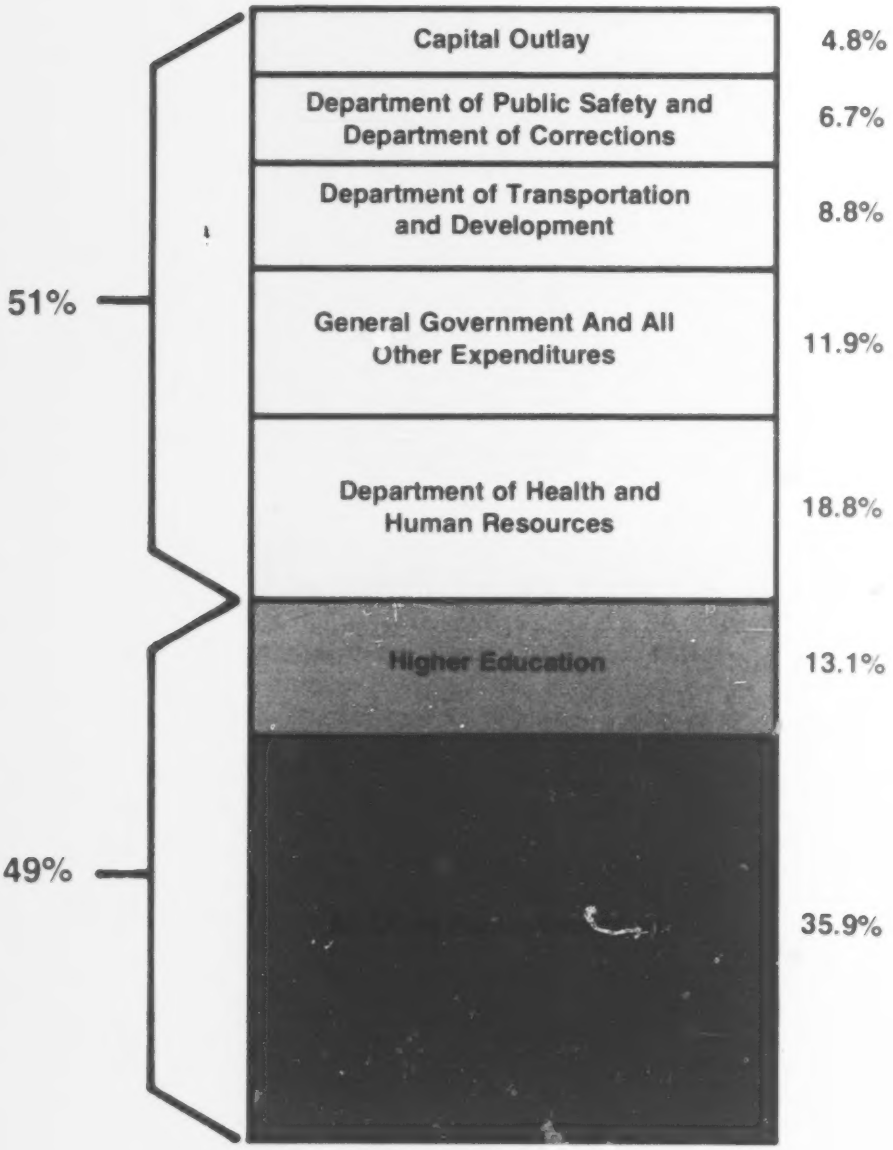
As shown in Figure 7-1, public education at all levels currently constitutes 49 percent of Louisiana's expenditures of state general fund dollars. Higher education accounts for 13.1 percent of this amount, while all other public education comprises 35.9 percent. A complete description of Louisiana's public education revenues and expenditures (excluding higher education) is available in the series of annual reports prepared by the Louisiana Department of Education.

Revenues

More than 50 percent of Louisiana's public school revenues come from the state government (Table 7-9). Local governments provide the second largest share of revenue; the federal government

FIGURE 7-1

EXPENDITURES OF STATE GENERAL FUND DOLLARS BY FUNCTION, 1978-1979



SOURCE: Louisiana Board of Regents.

supplies the smallest portion. However, the NEA state rankings for 1977-1978 placed Louisiana tenth in percentage of school revenue from state government, forty-third in percentage of school revenue from local governments, and sixth in percentage of school revenue from the federal government. These rankings indicate that Louisiana state government contributes a larger proportion of public school revenues than most other states; Louisiana local governments provide a much smaller share of revenues than the national average; further, Louisiana has a greater dependence upon federal funds than other states.

Revenue per pupil in average daily attendance in Louisiana public elementary and secondary schools in 1975-1976 equaled $1,363 —markedly lower than the national average amount of $1,715. NEA ranked Louisiana thirty-seventh among the states in 1976-1977, with $1,524 per pupil, as compared to the national figure of $1,831. However, significant progress was made in 1977-1978 when Louisiana moved to a ranking of twenty-fifth among the states, with an estimated per-pupil amount of $1,831, compared to the national average of $2,012.

TABLE 7-9
REVENUE RECEIPTS FOR PUBLIC ELEMENTARY AND SECONDARY SCHOOLS IN LOUISIANA, 1975-1979
(thousands)

	Total Revenue Receipts	Federal		State		Local*	
		Amount	% of Total	Amount	% of Total	Amount	% of Total
1975-1976†	$1,055,453	$153,858	14.6	$604,591	57.3	$297,004	28.1
1976-1977‡	1,108,822	159,259	14.4	600,681	54.2	348,882	31.5
1977-1978§	1,248,118	182,853	14.7	714,736	57.3	350,529	28.1
1978-1979§	1,340,000	215,000	16.0	750,000	56.0	375,000	28.0

SOURCE: Louisiana State Planning Office.

* Local revenues include revenues from the intermediate level.
† Statistics from U.S. Department of Health, Education and Welfare, National Center for Education Statistics, **Digest of Education Statistics, 1977-1978.**
‡ Revenue receipt amounts from Louisiana Department of Education's annual report for 1976-1977; percentages calculated by Louisiana State Planning Office.
§ Statistics from National Education Association, **Estimates of School Statistics, 1978-1979.**
NOTE: Because the above statistics were supplied by such various sources, comparisons between years could be misleading.

Expenditures

Net expenditures for public education in Louisiana equaled $1,013,381,511 or approximately $1,329 per pupil in average daily attendance in 1976-1977 (Table 7-10). The NEA projected 1977-1978 expenditures in Louisiana of $1,169,485,000 or $1,565 per pupil and 1978-1979 expenditures of $1,245,502,000 or $1,671 per pupil. The association ranked Louisiana thirtieth among the states in expenditures per pupil in average daily attendance in 1976-1977 and twenty-third in 1977-1978. NEA estimated that between 1967-1968 and 1977-1978 Louisiana increased expenditures per pupil in average daily attendance by 180.7 percent—above the national increase of 174.8 percent; the association ranked Louisiana twenty-fifth among the states in percentage of increase during that period.

TABLE 7-10
LOUISIANA PUBLIC SCHOOL EXPENDITURE PER PUPIL IN AVERAGE DAILY ATTENDANCE
1967-1977*

School Year	Net Expenditure	Expenditure Per Pupil
1967-1968	$ 456,654,364	$ 590.04
1969-1970	511,530,573	658.72
1971-1972	657,512,987	875.96
1973-1974	756,007,161	992.67
1975-1976	959,270,451	1,248.89
1976-1977	1,013,381,511	1,329.38

SOURCE: Louisiana Department of Education, **One Hundred Twenty-Eighth Annual Report for the Session 1976-1977.**

* Includes grades 1-12, kindergarten, special (elementary and secondary) and postgraduate students.

Activities to Achieve Quality Education

In view of the pivotal role which education plays in the socioeconomic well-being of Louisiana citizens, the state has recently instituted laws and programs to upgrade the quality of the educational process in the state and to require accountability on the part of educators.

Accountability

Act 709 of the 1976 Louisiana Legislature mandated a program of accountability for Louisiana schools. As a result, 26 school districts initiated educational accountability programs. Act 709 was superceded by Act 621 (1977 Louisiana Legislature) which called for the development and statewide implementation of an educational accountability program with accountability to be shared by professional school personnel at both the state and local levels as well as the public. The legislative intent of Act 621 is "to provide for the establishment of procedures for shared accountability in the public educational system; to assure that education programs operated in public schools lead to the attainment of established goals for education; to provide for a uniform system of evaluation of the performance of school personnel; to provide information for accurate analysis of the costs associated with public education programs; and to provide information for an analysis of the differential effectiveness of instructional programs." Several components of the accountability plan have been implemented.

Teacher Competency

Legislation designed to ensure a minimum proficiency level for persons entering the teaching profession was enacted recently in Louisiana. Acts 756 and 757 of the 1977 Louisiana Legislature increased the educational and field experience requirements of prospective teachers. Act 16 of the 1977 Special Legislative Session made achievement of a passing score on the National Teachers Examination a prerequisite for initial state teaching certification after September 15, 1978. In addition, Act 10 of the 1977 Special Legislative Session initiated a program to improve in-service teacher training.

A free college tuition program—designed to encourage and enable teachers to upgrade and improve skills—was created under Act 20 of the 1977 Legislature and amended by Act 718 of the 1978 Legislature. (An evaluation of this program is offered by PAR in its November 1978 publication entitled **Free College Tuition for Teachers**.)

Academic Programs

Workshops on proficiency standards for reading and mathematics have been held throughout the state to assist teachers in assimilating minimum standards into their program content. Resource guides for teachers have been developed and the implementation of

model programs to improve basic teaching skills has been encouraged. The recently created Bureau for Curricula, In-service and Staff Development (Louisiana Department of Education) is formulating a complete course of study for all major academic fields.

Increased local education agency and citizen involvement is evident in a variety of standing committees, which are researching and planning such topics as competency-based education, functional literacy testing, accreditation of elementary and secondary schools, statewide curricula, and mandatory kindergarten (feasibility study).

Adult Education

In 1976-1977 enrollment in Adult Basic Education and Act 43 Adult Education programs across the state totaled 30,375 students. The average age of students was 26.7 years. There were 11,447 males and 18,928 females enrolled; 18,019 students were white and 12,356 were nonwhite. Upon initial testing, the average grade achievement level of these students was 8.5; final testing showed an achievement level of 10.2—an average grade elevation of 1.7. The total number of hours attended by adult education students was 2,243,469 or an average per student of 73.9 hours. Of the total enrollment for 1976-1977, 9,278 students dropped out; 5,500 received up-grade certificates; 3,525 completed eighth grade; and 7,147 were recommended for the General Educational Development Test to secure a high school equivalency diploma. The Department of Education indicated expenditures of $2,949,737 for adult education in 1976-1977.

Special Education

"Special education" refers to a system of activities and services carried out on the local, state and federal levels for the benefit of children deemed "exceptional". As stipulated by federal statute (Public Law 94-142), every child—regardless of handicapping conditions—has a right to a free, appropriate, public education. In 1977 the Louisiana Legislature enacted Act 754 to implement the federal law. The Louisiana statute established what is probably the strongest commitment to the education of handicapped children in the nation. Act 754 applies to all exceptional children aged 3-21 who are or may be receiving services, regardless of placement setting; includes all handicapping conditions covered in the federal law; and encompasses slow learners as well as gifted and talented children.

The NEA indicated that handicapped children represented 5.63 percent of all children in Louisiana in 1976-1977—a figure significantly above the national mean of 4.54 percent; moreover, handicapped children represented 8.24 percent of school age children—again, markedly above the national average of 6.82 percent. It must be remembered that the Louisiana definition of handicapped or exceptional children (as mandated by Act 754) in its special education program is more inclusive than the general definition. Thus, Louisiana figures for handicapped or exceptional children may be artificially inflated, especially when compared with national figures. The Louisiana Department of Education reported special education expenditures of $11,205,335 during 1976-1977. Enrollments in special education classes for 1977-1978 are listed in Table 7-11.

TABLE 7-11
ENROLLMENTS IN LOUISIANA SPECIAL EDUCATION CLASSES, 1977-1978

Type	Enrollment
Gifted	3,098
Slow Learners	5,937
Educable Mentally Retarded	17,034
Trainable Mentally Retarded	2,636
Deaf or Hard of Hearing	521
Blind or Partially Sighted	224
Orthopedic or Cerebral Palsied	288
Emotionally Disturbed	3,067
Severely and Profoundly Mentally Retarded	92
Learning Disabled	11,524
Deaf and Blind	23
Autistic	66
Multiple-handicapped	420
Homebound	609
All Others	942
Special Education Membership Grades 9-12	4,487
Total Special Education Membership	
Elementary	18,152
Secondary	9,506
Resource/Itinerate	18,807
Speech Therapist	45,923

SOURCE: Louisiana Department of Education, **One Hundred Twenty-Eighth Annual Report for the Session, 1976-1977.**

The Office of Special Education (Louisiana Department of Education) has established a process for approving special education programs in special schools and in regular elementary and secondary schools. Louisiana has approximately 1,500 special education programs and 110 special schools—77 public and 33 nonpublic. As of October 1978, 37 public special schools had been approved and 32 were probationally approved; one nonpublic special school had been approved, 31 were probationally approved and one remained unapproved.

As of May 1978, 23,877 children statewide awaited evaluation for special education. Of this number, 17,546 were awaiting initial evaluation and 6,331 were scheduled for reevaluation. Following implementation of a new flexible evaluation model and increased evaluation activities, waiting lists had been reduced approximately 32 percent by August 1978.

VOCATIONAL EDUCATION

As defined by the Louisiana Board of Elementary and Secondary Education, the primary functions of vocational education are to train or retrain individuals for gainful employment as skilled workers, technicians or semiprofessionals; and to prepare individuals for enrollment in advanced technical education programs. Vocational education courses are offered at the secondary, postsecondary and adult levels. Secondary vocational education is designed for persons attending high school; postsecondary vocational education is directed toward those who have left high school and desire an organized program of study in preparation for entering the labor market; and adult vocational education is aimed at those who are already employed and wish to obtain education on a part-time basis. Subject categories offered through vocational education include agriculture, distributive education, health, home economics, business and office, technical, and trades and industry. Among secondary students, the largest enrollments are in the business and office, home economics, and agriculture categories. Most postsecondary and adult students enroll in trades and industry or business and office courses.

In 1976-1977 total vocational education enrollment was 229,097—a striking increase over the previous year's enrollment of 199,641. Virtually all of this increase occurred at the secondary level —a gain of almost 30,000 students—while postsecondary enrollments increased slightly and adult enrollments showed a small decrease.

By 1979 Louisiana will have 50 public vocational-technical schools: eight regional institutes, 19 area schools and 23 branches (Figure 7-2). Public vocational-technical schools in Louisiana are tuition free; however, minimal fees are assessed in certain programs. Although these institutions provide instruction at the postsecondary level, they do not confer academic degrees. Further, general education is not offered; emphasis is on training for a specific occupation rather than on preparing for career diversity or mobility. Approximately 98 percent of the state's population lives within 20 miles of a public vocational-technical school.

HIGHER EDUCATION

The Louisiana Constitution of 1974 mandates that the Louisiana Board of Regents coordinate, plan and exercise budgetary responsibility for higher education in Louisiana. The board collects, analyzes and publishes detailed information on higher education in Louisiana. (The Louisiana Board of Regents provided most of the data for this section; it should be noted that many of the figures for 1978-1979 are preliminary and may, therefore, be subject to some modification at a later date.)

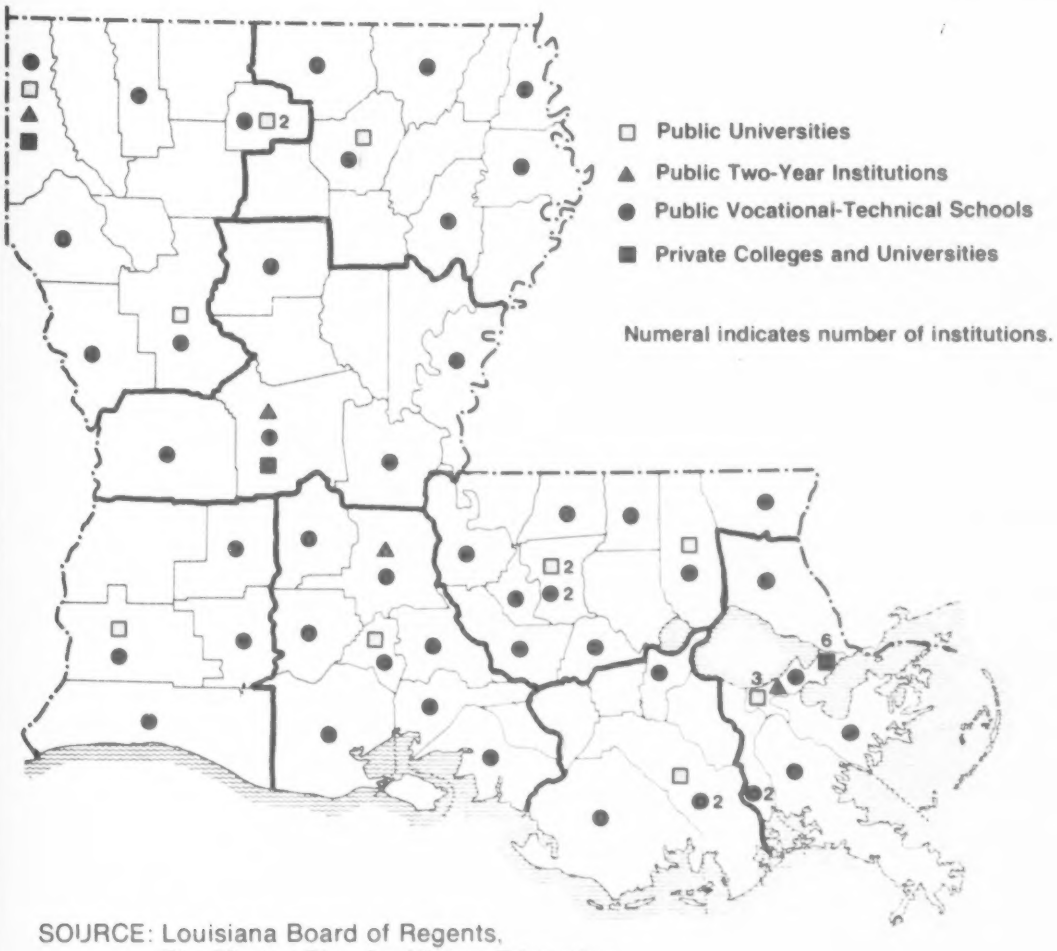
Availability and Accessibility

Louisiana currently has 28 institutions of higher learning (Figure 7-2)—20 in the public sector, 8 in the independent sector. Public institutions are divided into three management systems: The Board of Trustees for State Colleges and Universities (Trustees System) governs nine units; the Louisiana State University Board of Supervisors (LSU System) governs eight units; and the Southern University Board of Supervisors (Southern System) governs three units. Table 7-12 lists public and private colleges and universities in Louisiana.

Louisiana's system of public higher education is a balanced one, comprised of the following elements: a comprehensive state university (Louisiana State University-Baton Rouge), three single-purpose institutions (the Center for Agricultural Sciences and Rural Development, with statewide responsibility for agricultural research and extension; the Louisiana State University Medical Center, which includes two schools of medicine, a dental school, schools of nursing and allied health professions, and a graduate school; and the Louisiana State University Law Center), twelve senior universities and four two-year colleges. Approximately 95 percent of Louisiana's citizens reside within 40 miles of a public college or university.

FIGURE 7-2

LOUISIANA'S POSTSECONDARY EDUCATION INSTITUTIONS



SOURCE: Louisiana Board of Regents, **The Master Plan for Higher Education in Louisiana.**

In an effort to lower barriers to higher education, Louisiana has traditionally maintained low tuitions and an open admissions policy in its public colleges and universities. Louisiana's tuition charges rank forty-fifth in the nation. In 1976-1977 state appropriations to defray the cost of a student's education averaged approximately four dollars for every one dollar provided by the student. In other words, the state contribution was 80 percent while the student contribution was 20 percent. (It should be noted that nationally the student's share

ranges from 16 percent to 33.34 percent. The Carnegie Commission on Higher Education has recommended a student share of one-third of instructional costs.)

Louisiana also offers financial aid to independent institutions. For several years the state has appropriated funds for students attending Tulane Medical School. In 1975 the Louisiana Legislature enacted legislation which provides aid to independent colleges and universities based upon the number of Louisiana residents enrolled in academic programs.

Enrollment

The percentage of Louisiana high school graduates entering college—already below the national average—is decreasing. The percentage of previous year's public high school graduates entering college fell from 50.2 percent in 1968-1969 to 40.3 percent in 1975-1976. (Much of this decline may be explained by the dramatic increase in the number of high school students completing vocational education courses.) Nonetheless, enrollments in Louisiana institutions of higher learning have shown an overall increase since 1973. Projections by the Louisiana Board of Regents indicate that enrollments in both public and private institutions will peak in 1980 and then decline. Enrollments in both public and private institutions for 1978-1979 are shown in Table 7-12.

Public Institutions

Enrollments in Louisiana institutions of higher education have increased 12 percent since 1973. Enrollments expanded 13 percent from 1973 to 1975 and declined less than 1 percent annually between 1976 and 1978 (Figure 7-3).

Fall student enrollment in Louisiana's public institutions of higher learning totaled 130,069 in 1976. Of that number, Louisiana residents comprised 92.55 percent. Texas, Arkansas and Mississippi residents constituted 2.17 percent of the student population, while residents of all other states made up 3.15 percent. Foreign students accounted for 2.13 percent of the total enrollment in 1976. Fall student enrollments in Louisiana's public colleges and universities equaled 129,880 in 1977 and 128,920 in 1978. Louisiana residents continued to comprise the vast majority of these enrollments.

During the 1970's enrollments of females and blacks increased significantly in proportion to total enrollment. Between 1972 and 1977 the number of females enrolled grew by 28.54 percent, while the

TABLE 7-12
LOUISIANA'S PUBLIC AND INDEPENDENT INSTITUTIONS OF HIGHER LEARNING, WITH ENROLLMENTS, 1978-1979

Public		Independent	
Institution	**Enrollment**	**Institution**	**Enrollment**
Trustees System			
Delgado	9,583	Centenary	880
Grambling	3,639	Dillard	1,217
Louisiana Tech	9,239	Louisiana College	1,298
McNeese	5,300	Loyola	4,177
Nicholls	6,317	Holy Cross	783
Northeast	8,872	Dominican	710
Northwestern	5,894	Tulane	9,633
Southeastern	7,200	Xavier	1,904
Southwestern	12,988		
		Total	**20,602**
LSU System			
LSU-Alexandria	1,537		
LSU-Agricultural Center	0*		
LSU-Baton Rouge	25,429		
LSU-Eunice	1,202		
LSU Law Center	771		
LSU Medical Center	2,391		
LSU-Shreveport	3,178		
UNO	13,909		
Southern System			
Southern-Baton Rouge	8,071		
Southern-New Orleans	2,708		
Southern-Shreveport	692		
Total	**128,920**		

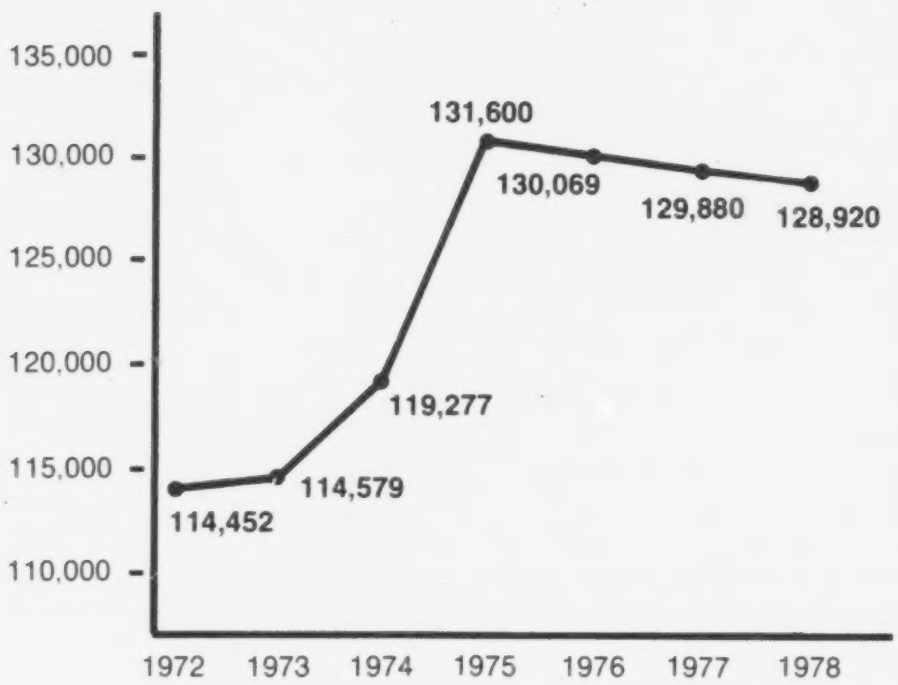
SOURCE: Louisiana Board of Regents, Working paper.

*The LSU Center for Agricultural Sciences and Rural Development, a research extension unit, is a noninstructional component of the LSU system.

number of males enrolled increased by only 1.67 percent. Female enrollment increased from 43.96 percent of total enrollment to 49.79 percent, while male enrollment decreased from 56.04 percent of total enrollment to 50.21 percent. In 1978 female enrollments exceeded male enrollments for the first time in recent history. In 1968 blacks accounted for less than one-fifth of undergraduate enrollments. By 1976 blacks comprised more than one-fourth of undergraduate enrollments. Whereas total undergraduate enrollment increased 30.73 percent from 1968 to 1976, black enrollment increased 75.69 percent.

FIGURE 7-3

TOTAL FALL HEADCOUNT ENROLLMENT IN LOUISIANA PUBLIC HIGHER EDUCATION, 1972-1978



SOURCE: Louisiana Board of Regents.

The influx of part-time students in Louisiana's system of higher education continues to expand—especially in the public sector. In 1972, 22.92 percent of all students in the public sector were enrolled on a part-time basis. By 1978 the percentage had risen to 27.43 percent. This trend is less obvious in the independent sector.

Independent Institutions

Total 1977 fall full-time enrollment in Louisiana's independent higher education institutions was 20,745; this number decreased

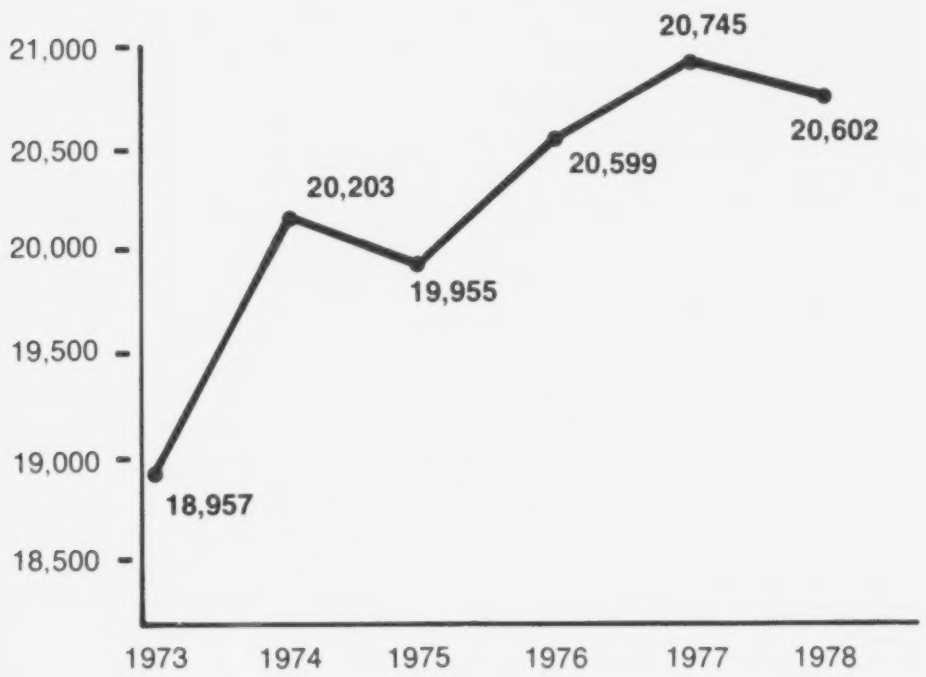
slightly to 20,602 in 1978 (Figure 7-4). Nearly 11,000 Louisianians are currently enrolled in these private colleges and universities. In the independent sector, female enrollments as a percentage of total enrollments increased from 42.4 percent in 1973 to 48.2 percent in 1978. At that rate, female enrollments will exceed male enrollments in the independent sector by 1980.

Degrees Conferred

Table 7-13 displays the total number of degrees conferred by level in Louisiana's public colleges and universities between 1972

FIGURE 7-4

TOTAL FALL HEADCOUNT ENROLLMENT IN LOUISIANA INDEPENDENT HIGHER EDUCATION, 1973-1978



SOURCE: Louisiana Board of Regents.

TABLE 7-13
TOTAL DEGREES CONFERRED BY LEVEL IN LOUISIANA'S INSTITUTIONS OF PUBLIC HIGHER EDUCATION, 1972-1977

Year	Associate	Bachelor's	Master's	Professional	Doctoral	Total
1972-1973	475	12,781	3,254	426	229	17,165
1973-1974	864	13,441	3,405	489	263	18,462
1974-1975	1,077	13,465	3,418	555	250	18,765
1975-1976	1,650	13,405	3,567	552	204	19,378
1976-1977	1,690	12,870	3,644	627	201	19,032

SOURCE: Louisiana Board of Regents, **The Master Plan for Higher Education in Louisiana.**

and 1977. The largest percentage increase has been at the associate and professional levels. Disciplines which have shown the largest percentage increase in degrees conferred at the associate level include business and commerce technology, health services/paramedical technology and public service technology. The largest increase at the professional level has been in the health professions.

Faculty Members

The number of full-time instructional faculty employed in Louisiana's public colleges and universities has increased steadily between 1974-1975 and 1978-1979—from 4,557 to 5,173. However, the percentage of faculty members holding tenure has shown little variance during that period—ranging from 59.8 percent to 60.5 percent (Table 7-14).

Full-time instructional faculty members in Louisiana's independent institutions also increased from 1975-1976 to 1977-1978. However, faculty numbers fell markedly in 1978-1979—dropping from 1,015 to 920. As would be expected, the percentage of tenured faculty simultaneously reversed a downward trend and grew from 43.5 percent to 53.3 percent in 1978-1979 (Table 7-14).

In 1976-1977 average salaries for full-time faculty in Louisiana public institutions were lower than the national averages for each of four standard academic ranks. In Louisiana the average salary for a professor was $17,770; for an associate professor, $15,305; for an assistant professor, $13,081; and for an instructor, $10,525. Average United States salaries for the four respective ranks (based on U.S. Department of Health, Education and Welfare [HEW] statistics) were

TABLE 7-14
FULL-TIME INSTRUCTIONAL FACULTY, WITH PERCENT TENURED, IN LOUISIANA'S PUBLIC AND INDEPENDENT INSTITUTIONS OF HIGHER EDUCATION
1974-1975 to 1978-1979

	Public Institutions		Independent Institutions	
Year	Total Faculty	Percent Tenured	Total Faculty	Percent Tenured
1974-1975	4,557	59.8	N/A*	N/A
1975-1976	4,695	60.1	897	49.9
1976-1977	5,068	60.8	909	45.3
1977-1978	5,309	59.7	1,015	43.5
1978-1979	5,173	60.5	920	53.3

SOURCE: Louisiana Board of Regents, Working paper.

* N/A indicates data not available.

$23,773; $17,884; $14,654; and $11,819. Some Louisiana public institutions have an additional academic rank entitled "Professor and Department Head". In 1976 the average salary for this rank was $19,241. The Louisiana overall average faculty salary for 1976, including professors and department heads, was approximately $15,184—considerably below HEW's overall national average figure of $17,524.

Faculty salaries at Louisiana State University-Baton Rouge (LSU-BR) are the most competitive nationally. Yet, the National Education Association ranked Louisiana thirty-sixth among the states in average salaries paid to faculty at public universities in 1976-1977. Louisiana ranked forty-ninth in average salaries paid to faculty at other four-year public colleges; and the state was forty-fifth in average salaries paid to faculty at public two-year colleges. Furthermore, monthly salary offers to candidates for doctoral degrees—most faculty positions require doctoral degrees—have risen steadily since 1970. For example, beginning monthly salary offers made by business, industrial and governmental employers to doctoral candidates in chemical engineering increased from $1,375 in 1970 to $1,882 in 1977. (This equaled an average beginning salary of $22,584 per year in 1977.) During the same period monthly salary offers to candidates in mathematics grew from $1,421 to $1,704; in physics, from $1,309 to $1,698.

Faculty salaries in Louisiana's public colleges and universities have increased since 1976-1977. The overall average salary for all ranks rose to $17,624 in 1978-1979 (Table 7-15). National data for the same period are not yet available for comparison; however, increases in national faculty salary figures should be expected.

TABLE 7-15
AVERAGE FACULTY SALARY, BY RANK, IN LOUISIANA PUBLIC INSTITUTIONS OF HIGHER LEARNING 1978-1979

Rank	Trustees System	Southern System	LSU System	Statewide Average	% Change from 1977-1978
Professor and Department Head	$22,520	$20,685	$26,571	$23,526	4.9
Professor	20,225	20,100	26,447	22,807	4.8
Associate Professor	18,370	17,995	19,825	18,808	4.3
Assistant Professor	15,613	15,196	16,180	15,699	3.4
Instructor	12,649	12,292	12,695	12,621	1.9
Average All Ranks	**16,972**	**16,382**	**19,153**	**17,624**	**4.6**

SOURCE: Louisiana Board of Regents, Unpublished data.

Colleges and universities must compete not only among themselves but among business, industrial and governmental employers for qualified personnel. Since the ability to attract and retain gifted, productive faculty is in large part dependent upon salaries, Louisiana could soon face serious problems in maintaining the highest levels of instruction, research and public service in its institutions of higher learning.

Revenues and Expenditures

In 1972-1973 Louisiana's total higher education budget was $176,119,051, or 25.8 percent of the total education budget for the state. By 1978-1979 the total higher education budget (including aid to independent institutions) had risen to $380,468,580 and accounted for 27.63 percent of the state's total education budget. When compared to the total state budget, higher education accounted for 13.1 percent of all state general fund expenditures (Figure 7-1).

Of the $380,468,580 in total higher education expenditures, state appropriations accounted for $278,078,328 (16.7 percent more than

in 1977-1978), federal monies totaled $10,488,761 (6.3 percent less than in 1977-1978), self-generated funds equaled $80,567,796 (6.9 percent higher than in 1977-1978), and interagency transfers and all other funds added $11,333,695 (22 percent more than in 1977-1978).

The combination of state appropriation and student tuition and fees accounts for approximately 94 percent of unrestricted revenues available to Louisiana's public colleges and universities. The balance is supplied by such varied sources as private donations, interest and investment earnings, sales and services, and federal programs.

In 1978-1979 Louisiana's state appropriation for higher education equaled $70.11 per capita. This was a 19 percent increase over the 1976-1977 per capita educational expenditure. Louisiana's state appropriations in 1978-1979 represented a 181 percent increase over appropriations in 1968-1969. However, the ten-year percentage increase when adjusted for inflation was 95 percent. Louisiana's appropriation per full-time equivalent (FTE) student, depending upon Southern Regional Education Board classification of institutions, ranged from $166 to $615, or 8 percent to 24 percent below the national average in 1978-1979.

In accordance with Article VIII, Section 5-(D)(5) of the Louisiana Constitution of 1974, Louisiana uses a formula for the equitable distribution of funds to institutions of higher education. Table 7-16 shows the 1978-1979 operating budget revenues and expenditures for formula institutions. The formula method results in the accumulation of measurable outcomes that remove the necessity for subjective evaluation. Formula funding is objective in nature and identifies the needs of educational institutions in comparable terms. This formula uniformly places financing on a per-student credit hour (SCH) basis for each institution for which SCHs are the primary quantifiable unit.

Not all institutions or operations, however, are funded under an SCH derived formula basis. A method of measurement has not been devised for certain institutions or operations not utilizing SCH as the primary determinant of productivity (e.g., Louisiana State University Medical Center). For this reason exclusions are separated from formula consideration to provide a more sound basis of comparison between institutions.

Table 7-17 depicts sources of funds and expenditures by object and function for formula exclusion institutions.

TABLE 7-16
ANALYSIS OF FUND SOURCES AND EXPENDITURES BY OBJECT AND BY FUNCTION 1978-1979 OPERATING BUDGET STATE TOTAL—FORMULA UNITS ONLY

	Budgeted Revenues Expenditures	Percent of Total Revs./ Expenditures
Revenues by Source		
State	$193,145,625	71.809
Federal	1,403,676	0.522
Self-Generated	70,446,946	26.191
Interagency Transfer	3,974,969	1.478
Total Revenues by Source	**$268,971,216**	**100.000**
Expenditures by Object		
Salaries	$171,702,981	63.837
Compensation	9,055,859	3.367
Benefits	19,020,147	7.071
Total Personal Services	199,778,987	74.275
Travel	2,937,853	1.092
Operating Services	29,157,110	10.840
Supplies	9,746,198	3.624
Professional Services	1,682,720	0.626
Other	10,415,961	3.873
Capital Outlay	6,878,612	2.557
Library Acquisitions	5,068,049	1.884
Internal Transaction	3,304,726	1.229
Revenues/Expenditures	0	0.000
Total Expenditures by Object	**$268,970,216**	**100.000**
Expenditures by Function		
Instruction	$132,640,883	51.707
Research	6,583,369	2.566
Public Services	4,577,732	1.785
Academic Support	17,226,759	6.715
Library	13,464,387	5.249
Student Services	13,809,427	5.383
Institutional Support	26,248,635	10.232
Scholarships	4,464,964	1.741
Plant Operation & Maintenance	37,509,149	14.622
Total E & G Expenditures	256,525,305	100.000
Debt Service/Interagency Transfer	3,310,466	
Other	8,900,445	
Revenues/Expenditures	235,000	
Total Expenditures by Function	**$268,971,216**	

SOURCE: Louisiana Board of Regents.

TABLE 7-17
ANALYSIS OF FUND SOURCES AND EXPENDITURES BY OBJECT AND BY FUNCTION 1978-1979 OPERATING BUDGET STATE TOTAL—FORMULA EXCLUSIONS ONLY

	Budgeted Revenues Expenditures	Percent of Total Revs./ Expenditures
Revenues by Source		
State	$84,504,089	71.590
Federal	8,722,390	7.389
Self-Generated	15,223,892	12.897
Interagency Transfer	9,588,129	8.123
Total Revenue by Source	**$118,038,500**	**100.000**
Expenditures by Object		
Salaries	$ 74,670,297	63.259
Compensation	4,022,716	3.408
Benefits	7,634,346	6.468
Total Personal Services	86,327,359	73.135
Travel	2,244,741	1.902
Operating Services	11,431,607	9.685
Supplies	11,377,714	9.639
Professional Services	648,584	0.549
Other	398,169	0.337
Capital Outlay	5,124,295	4.341
Library Acquisitions	486,031	0.412
Internal Transaction	0	0.000
Revenues/Expenditures	0	0.000
Total Expenditures by Object	**$118,038,500**	**100.000**
Expenditures by Function		
Instruction	$ 29,173,954	29.308
Research	19,615,969	19.706
Public Services	20,829,831	20.926
Academic Support	5,458,711	5.484
Library	1,175,010	1.180
Student Services	582,153	0.585
Institutional Support	12,078,709	12.134
Scholarships	103,000	0.103
Plant Operation & Maintenance	10,525,185	10.574
Total E & G Expenditures	99,542,522	100.000
Debt Service/Interagency Transfer	0	
Other	18,495,978	
Total Expenditures by Function	**$118,038,500**	

SOURCE: Louisiana Board of Regents.

The Master Plan

On December 15, 1977, the Louisiana Board of Regents adopted **The Master Plan for Higher Education in Louisiana**, the most significant development in the state's higher education program in recent years. The Master Plan represents the most comprehensive effort to plan for the future of higher education ever undertaken in Louisiana. It provides a review and analysis of higher education—both public and independent—in the state and presents recommendations designed to maintain and enhance the quality of Louisiana's education system.

The overriding problem in Louisiana's public higher education network was found to be a lack of adequate funding to operate quality programs. Recommendations were made to increase state appropriations for higher education and to increase tuition charges by 1983 to a level at which the student's share of instructional costs will equal 25 percent.

Other major recommendations included adoption of a selective admissions policy at LSU-BR to provide a more meaningful student/program match; coordination of existing higher education resources, including independent institutions; and creation of additional one- and two-year programs throughout the state.

The Master Plan was intended to be used by the governor, the legislature, the higher education institutions, the management boards and the Board of Regents in their policy and program decisions. Implementation of the recommendations is not mandatory; rather, recommendations must perforce be subject to the review and approval of some or all of the appropriate educational authorities.

Academic Program Review

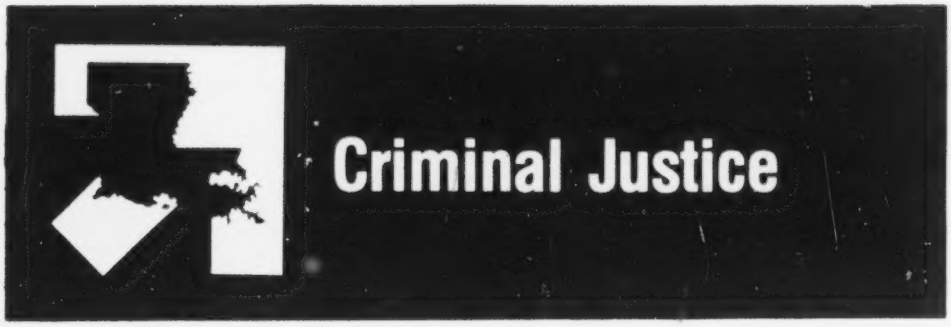
As stipulated by the Louisiana Constitution and Act 313 of the 1975 Louisiana Legislature, the Louisiana Board of Regents has the power to revise or eliminate an existing degree program, department of instruction or similar subdivision of any public institution of higher education. During 1977 and 1978 the board conducted a three-phase doctoral program review that involved 99 programs in 40 separate disciplines offered at 7 public institutions. As a result, 8 programs were commended for excellence, 66 programs that demonstrated potential for excellence were maintained and 25 programs were terminated. The Regents are now reviewing master's and specialist programs in education as well as master's programs in history, mathematics and forestry.

The academic program review of the Louisiana Board of Regents has received national acclaim from educators and support from professional organizations and societies. The board's academic program review has unquestionably resulted in cost savings to the state through the termination of outmoded, superfluous programs. However, the primary objective of the review has been to enhance higher education in Louisiana by rewarding quality programs and eliminating programs which do not meet minimum standards or needs.

The Board of Regents is also authorized to approve, disapprove or modify a proposed degree program, department of instruction, division or similar subdivision. Since 1972 the board and its predecessor, the State Coordinating Council on Education, have approved 226 new academic degree programs. The largest number of programs approved was at the associate degree level. (Since Louisiana does not have a comprehensive community college system, the Board of Regents has urged existing colleges and universities to provide these programs where need is demonstrated.) Since 1969 the Board of Regents and its predecessor have rejected 51 new academic programs and deferred 8 others for further study. These programs were found either to be inadequate in such aspects as faculty resources, library resources or physical facilities, or to be unnecessarily duplicative of programs at other institutions, detrimental to existing programs in their own institutions or beyond the role and scope of their institutions.

CONCLUSION

Admittedly, Louisiana's past performance in many facets of public education has been somewhat lackluster. However, the critical need for improvement in the state's educational programs has been recognized in recent years. Legislators, policymakers and professional educators have provided the requisite legislation, programs and commitment to upgrade the educational process in Louisiana. Through such efforts as accountability, assurance of instructional and administrative competency, increased vocational, adult and special education programs, academic program review, and **The Master Plan for Higher Education in Louisiana**, the state has laid the groundwork for quality education in Louisiana.



Chapter 8

More than 900 separate agencies comprise the criminal justice system in Louisiana. The Louisiana Criminal Justice Information System (LCJIS) Division of the Louisiana Commission on Law Enforcement collects data from these agencies for compilation and publication. (A description of LCJIS and detailed information on the criminal justice system agencies in Louisiana are available in the division's latest annual report, **Crime in Louisiana 1977**.) Criminal justice statistics for the State of Louisiana were taken from LCJIS reports; figures for the South and the nation were extracted from Federal Bureau of Investigation publications.

LOUISIANA CRIME RATES

Users of crime statistics must be aware that the validity of crime data is questionable. The number of crimes reported is known to be smaller than the number of crimes actually committed; the ratio of crimes committed to crimes reported varies considerably according to offense. In addition, the data which are collected may be misrepresentative: In the case of a multiple offense, often only the most serious offense is reported; thus, the actual sum of crimes reported does not accurately reflect total criminal activity.

To facilitate uniform crime reporting, both state and federal criminal justice information agencies have categorized seven criminal acts as "index crimes". These include four violent offenses (criminal homicide, forcible rape, robbery and aggravated assault) and three property offenses (burglary, larceny/theft and motor vehicle theft). "Crime rate" is defined as the total number of index crimes reported per 100,000 population.

LCJIS figures for 1975 and 1976 are estimates based on partial-year data supplied by law enforcement agencies. However, figures for 1977 and the first six months of 1978 reflect the actual figures reported to LCJIS. (The 1978 figures are preliminary and subject to change by the end of the year.) Therefore, comparison of the 1975 and 1976 figures with the 1977 and 1978 figures could be invalid.

Since 1975 the total index crime rate in Louisiana has shown a yearly increase. Of the index crimes reported, most occurred in metropolitan areas; however, certain index crimes displayed a marked rate of increase in nonmetropolitan areas. Property crimes comprised the vast majority of index crimes—over 85 percent. Yet, in 1977 violent crimes showed a dramatic increase of 8.9 percent in marked contrast to a 0.6 percent decrease in property crimes; further, preliminary figures for the first six months of 1978 indicated a violent crime increase of 3.5 percent and a property crime increase of only 0.4 percent. Index crimes increased at a more rapid rate in Louisiana than in the South and the nation during 1977; nonetheless, the Louisiana total index crime rate continues to be significantly lower than the index crime rates for the South and the nation.

While the total number of index crimes reported in Louisiana during 1977 (Table 8-1) increased by 2.5 percent over 1976 figures, index crimes reported in the South and the United States as a whole decreased 2.1 percent and 3.3 percent respectively during that period. (These figures do not necessarily indicate either a crime increase in Louisiana or a crime decrease in the South and the United States; rather, they may reflect changes in crime reporting by the citizenry or law enforcement agencies.) In 1977 property offenses accounted for 88.4 percent of index crimes in Louisiana, while violent offenses totaled 11.6 percent. The percentage of property crimes was slightly higher in the South and the nation—90.3 percent and 90.7 percent respectively; the percentage of violent crimes was slightly lower—9.7 percent and 9.3 percent respectively.

From 1976 to 1977 Louisiana's total index crime rate increased 0.4 percent. This compares with a 3.5 percent decrease in the South and a 4 percent decrease in the United States. In addition, Louisiana's violent crime rate showed a greater increase than either the South or the United States (8.9 percent as opposed to 5.2 percent and 1.5 percent.) Louisiana's property crime rate decreased only 0.6 percent, compared with 4.3 percent and 4.5 percent decreases in the South and the nation. However, Louisiana's 1977 total index crime rate of 4,432.5 remains significantly lower than the 4,618.1 rate in the South

TABLE 8-1
INDEX CRIMES REPORTED IN LOUISIANA, 1975–FIRST SIX MONTHS OF 1978*

Offense	1975	1976	1977	1978†
Criminal Homicide	518	508	600	289
Forcible Rape	913	1,050	1,203	586
Robbery	5,902	4,794	5,582	2,793
Aggravated Assault	11,456	11,915	12,917	6,554
Total Violent Crimes	18,789	18,267	20,302	10,222
Burglary	42,863	44,515	44,967	23,334
Larceny/Theft	82,262	95,205	95,394	47,896
Motor Vehicle Theft	11,997	11,608	13,156	6,606
Total Property Crime	137,122	151,328	153,515	77,836
Total Index Crime	155,911	169,595	173,817	88,058

SOURCE: Louisiana Commission on Law Enforcement, Louisiana Criminal Justice Information System Division.

* Comparison between 1975 and 1976 figures (which were estimated) and 1977 and 1978 figures (which were actual reported figures) could be somewhat misleading.

† These are preliminary figures reported for the first six months of 1978 and are subject to change by the end of 1978. Late reporting or errors in reporting may not be reflected in the figures shown.

and the 5,055.1 rate in the United States as a whole. Table 8-2 shows Louisiana index crime rates for 1975-1977 and preliminary rates for 1978. (Crime rates by parish are shown in Table 8-4, which appears later in the chapter.)

The most striking changes in Louisiana crime rates were associated with criminal homicide and robbery. The 1977 increase of 15.9 percent in criminal homicides contrasts dramatically with the decrease of 3.6 percent from 1975 to 1976. The 1977 state robbery rate increased 14 percent, reversing a three year pattern of decline.

Forcible rape continued a slowly increasing trend, while aggravated assault, the most numerous violent crime, accounted for 63.3 percent of reported violent index crimes in 1977.

Both burglary and larceny/theft rates decreased in 1977, by 1.1 percent and 1.9 percent, respectively. Nonetheless, larceny/theft remained the most numerous property crime, accounting for 62.1 percent of index property offenses. Motor vehicle theft increased 11 percent, in marked contrast to the 4.5 percent decrease during the period from 1975 to 1976.

TABLE 8-2
LOUISIANA INDEX CRIMES PER 100,000 POPULATION
1975–FIRST SIX MONTHS OF 1978

Offense	1975	1976	1977	1978*	Percent Change† 75-76	76-77
Criminal Homicide	13.7	13.2	15.3	7.2	- 3.6	15.9
Forcible Rape	24.1	27.3	30.6	14.7	13.7	12.1
Robbery	155.7	124.8	142.3	70.0	-19.8	14.0
Aggravated Assault	302.2	310.2	329.4	164.1	2.6	6.2
Total Violent Crimes	495.7	475.5	517.7	256.0	- 4.1	8.9
Burglary	1,130.8	1,158.9	1,146.7	584.4	2.8	- 1.1
Larceny/Theft	2,170.2	2,478.6	2,432.6	1,199.6	14.6	- 1.9
Motor Vehicle Theft	316.5	302.2	335.4	165.4	- 4.5	11.0
Total Property Crimes	3,671.5	3,939.8	3,914.8	1,949.4	9.3	- 0.6
Total Index Crimes	4,113.2	4,415.4	4,432.5	2,205.4	7.7	0.4

SOURCE: Louisiana Commission on Law Enforcement, Louisiana Criminal Justice Information System Division.

* These are preliminary figures reported for the first six months of 1978 and are subject to change by the end of 1978. Late reporting or errors in reporting may not be reflected in the figures shown.

† Comparison between 1975 and 1976 figures (which were estimated) and 1977 and 1978 figures (which were actual reported figures) could be somewhat misleading.

Preliminary figures for the first six months of 1978 indicated an index crime rate higher than the rate for the same period in 1977; yet the forcible rape rate was down from the rate for the same period in 1977. Both total violent crime and total property crime for the first two quarters of 1978 were higher than for the same period in 1977.

Crime in Louisiana is predominantly an urban problem. Seven metropolitan areas—encompassing 16 of the state's 64 parishes and 63.3 percent of the state's population—reported 81.6 percent of the state's index crimes in 1975, 81.8 percent in 1976 and 82.6 percent in 1977. Table 8-3 shows the distribution of index crimes for Louisiana's major metropolitan and nonmetropolitan areas.

Overall, violent crime rates for 1977 increased 13.1 percent in metropolitan areas and decreased 5.6 percent in nonmetropolitan areas. The criminal homicide rate, however, experienced a 25.2 percent increase in nonmetropolitan areas, in contrast to an 11.6 percent increase in metropolitan areas. Total property crime rates for 1977 declined 0.1 percent in metropolitan areas and 3.5 percent in nonmetropolitan areas. Yet, the motor vehicle theft rate in nonmetropolitan areas showed a net increase of 36.5 percent from 1975 to 1977, while the rate in metropolitan areas increased only 3.2 percent and the statewide rate grew 5.9 percent.

TABLE 8-3
DISTRIBUTION OF INDEX CRIMES IN METROPOLITAN AND NONMETROPOLITAN AREAS, 1977

	% Population	% Total Violent Crime	% Total Property Crime	% Total Index Crime
Nonmetropolitan	36.7	19.9	17.0	17.4
Alexandria	3.6	2.7	3.3	3.3
Baton Rouge	11.1	15.3	18.5	18.1
Lafayette	3.4	*	3.5	3.6
Lake Charles	4.0	3.9	4.1	4.1
Monroe	3.3	3.1	3.6	3.5
New Orleans	29.9	42.1	39.6	39.7
Shreveport	9.1	7.4	10.7	10.3

SOURCE: Louisiana Commission on Law Enforcement, Louisiana Criminal Justice Information System Division.

* An LCJIS audit deemed this data invalid due to crime reporting errors that inflated the total violent crime rate.

LAW ENFORCEMENT ACTIVITIES

In 1977, 9,344 law enforcement officers were employed in Louisiana; this represents a ratio of 2.4 officers per 1,000 people—slightly higher than the national ratio of 2.2 officers per 1,000 people. Reported expenditures for law enforcement in Louisiana totaled $164,289,159. Data on arrests and clearances provide some measure of law enforcement workload. Table 8-4 shows the number of index arrests, number of index clearances, and clearance rates for the total state and for each parish.

Arrests

Total arrests (both adult and juvenile as well as both index and nonindex) in Louisiana increased 7.4 percent, from 179,802 in 1976 to 193,187 in 1977, while total arrests declined 0.1 percent nationally. Total index crime arrests in Louisiana increased by 7.4 percent, from 46,114 in 1976 to 49,512 in 1977. Yet, total index crime arrests nationally fell 1.1 percent. Total drug-related arrests rose 10.4 percent in Louisiana, from 10,858 in 1976 to 11,983 in 1977, although drug-related arrests nationally dropped 3 percent.

TABLE 8-4
COMPARISON OF LOUISIANA LAW ENFORCEMENT INFORMATION BY PARISH, 1977

	No. of Offenses	Crime Rate	No. of Officers	No. of Index Arrests	No. of Index Clearances	Clearance Rate	1977 Expenditures
State Total	173,817	4,432.5	9,344	49,512	46,466	26.7	164,289,159
Acadia	1,058	1,950.9	100	360	404	37.9	1,358,300
Allen	384	1,839.8	51	65	60	15.6	570,322
Ascension	1,211	2,821.0	132	674	484	40.0	1,610,300
Assumption	209	1,020.8	43	94	82	39.2	448,099
Avoyelles	440	1,137.8	61	326	263	58.1	780,101
Beauregard	530	1,945.5	52	221	237	41.9	924,108
Bienville	187	1,107.4	18	177	170	84.2	336,680
Bossier	3,941	5,433.3	121	778	1,023	26.0	2,567,041
Caddo	11,837	4,869.2	511	3,147	3,178	24.2	10,991,736
Calcasieu	7,030	4,512.3	334	1,506	1,884	26.7	5,499,003
Caldwell	222	2,179.2	22	90	74	33.3	N/R*
Cameron	203	2,158.8	53	98	100	49.3	N/R
Catahoula	250	2,152.9	20	138	117	46.8	339,564
Claiborne	242	1,503.3	14	126	149	61.6	261,220
Concordia	785	3,559.2	43	319	341	42.7	1,067,135
DeSoto	274	1,158.3	26	72	77	28.1	388,022
EBR	28,676	8,787.8	997	6,160	5,934	20.6	14,086,073
E. Carroll	343	2,902.5	27	145	162	47.2	101,764
E. Feliciana	205	1,283.8	11	162	125	61.0	325,555
Evangeline	262	796.3	56	201	199	76.0	688,627
Franklin	92	390.5	30	111	91	98.9	354,119
Grant	249	1,675.1	23	116	101	40.6	328,356
Iberia	1,240	1,948.7	174	156	398	32.1	1,774,787
Iberville	910	2,962.4	123	299	291	32.0	1,292,356
Jackson	324	1,954.0	31	107	106	32.7	417,975
Jefferson	24,151	5,686.8	957	4,842	3,999	16.6	14,716,116
Jeff Davis	502	1,604.1	55	136	161	31.3	766,564
Lafayette	6,325	4,775.2	261	1,187	2,093	33.1	4,419,120
Lafourche	1,672	2,206.6	144	780	611	36.5	2,425,712
LaSalle	89	598.4	23	61	39	43.8	420,210
Lincoln	1,090	2,942.2	50	356	406	35.6	741,532
Livingston	1,047	2,181.2	83	559	491	46.9	1,107,779
Madison	521	3,610.0	39	204	221	42.4	509,580
Morehouse	1,018	3,084.9	61	304	342	33.6	1,236,314
Natchitoches	579	1,581.0	66	305	290	50.1	1,117,231
Orleans	39,897	7,109.3	1,594	12,709	9,436	23.7	36,475,000
Ouachita	6,118	4,727.0	261	2,366	2,974	48.6	3,667,748
Plaquemines	750	2,808.0	N/R	186	184	24.5	N/R
Pointe Coupee	69	316.7	31	68	62	74.7	328,656
Rapides	5,087	4,074.6	233	1,573	1,035	19.1	4,161,192
Red River	8	83.9	11	4	8	100.0	269,559
Richland	329	1,510.6	17	229	184	55.9	453,000
Sabine	336	1,682.9	42	92	71	21.1	543,050
St. Bernard	1,431	2,360.2	N/R	544	499	34.9	N/R
St. Charles	983	2,873.6	107	317	273	27.8	1,740,605
St. Helena	69	691.4	14	69	63	91.3	291,320
St. James	196	1,007.7	49	119	107	50.5	635,000
St. John	374	1,406.7	53	255	247	65.9	1,032,110
St. Landry	1,337	1,609.9	165	835	707	52.9	2,248,415
St. Martin	250	705.8	74	117	110	44.0	1,232,076
St. Mary	2,234	3,633.0	134	878	865	38.7	2,544,282
St. Tammany	3,545	4,092.9	194	1,046	1,042	29.2	1,079,840
Tangipahoa	2,395	3,238.7	119	854	906	37.5	2,216,417
Tensas	169	2,019.1	13	56	61	36.1	229,000
Terrebonne	2,362	2,698.8	146	453	542	22.9	688,784

TABLE 8-4—*Continued*

	No. of Offenses	Crime Rate	No. of Officers	No. of Index Arrests	No. of Index Clearances	Clearance Rate	1977 Expenditures
Union	540	2,701.8	18	155	166	30.7	336,305
Vermilion	660	1,423.0	118	210	195	29.5	1,298,545
Vernon	1,199	2,909.9	77	485	521	43.5	807,821
Washington	1,382	3,246.9	93	597	590	42.7	1,847,387
Webster	854	2,091.6	63	369	340	39.8	1,023,454
WBR	512	2,852.3	42	238	234	45.7	714,041
W. Carroll	114	861.0	15	65	65	51.2	239,661
W. Feliciana	182	1,809.1	14	57	110	60.4	N/R
Winn	385	2,321.7	30	184	166	43.1	475,353
State Police	---	---	805	---	---	---	23,739,137

SOURCE: Louisiana Criminal Justice Information System Division, Louisiana Commission on Law Enforcement, Law Enforcement Survey, 1977.

*N/R—Agency did not respond to the question.

Index arrests accounted for 25.6 percent of Louisiana's total arrests in both 1976 and 1977. Although the combined index categories did not change over that period, arrests for three index crimes increased dramatically—homicide, 22.3 percent; rape, 25.3 percent; and motor vehicle theft, 21.2 percent. Larceny/theft, the largest index arrest category, accounted for slightly more than half of all index arrests for 1976 and 1977.

In 1977 total juvenile arrests in Louisiana increased 10.7 percent; juvenile index arrests rose 11 percent. At the national level however, total juvenile arrests decreased 1.8 percent, and juvenile index arrests declined 1.2 percent. Juveniles accounted for 16.1 percent of all Louisiana arrests and 29.7 percent of index arrests. Total female arrests in Louisiana increased 7.3 percent and female index arrests rose 10 percent. Female arrests for the nation as a whole showed an increase also—2.5 percent for total arrests and 0.8 percent for index arrests.

Clearances

"Clearance" is defined as the solution of a case, the linkage of an offense to a particular offender or offenders. The arrest of one person may clear several crimes; conversely several persons may be arrested in the process of clearing one offense. "Clearance rate" is defined as the number of clearances divided by the number of offenses reported.

Information from law enforcement agencies in Louisiana reveals that 27 percent of index offenses were cleared during 1977—the same percentage clearance as in 1976. This clearance rate was higher than the clearance rates for the South and the United States—23.5 percent and 21 percent, respectively. Of the 46,466 index offenses cleared in Louisiana in 1977, violent crime clearances accounted for 25.3 percent and property crime clearances for 74.7 percent.

Louisiana law enforcement agencies cleared 85 percent of homicides, 57 percent of rapes and 70 percent of aggravated assaults reported. In the property offense classification 27 percent of robberies, 19 percent of burglaries, 25 percent of larceny/thefts and 16 percent of motor vehicle thefts were cleared. In general, law enforcement bodies are able to clear a higher percentage of offenses against persons than against property.

LOUISIANA COURT SYSTEM

The 54 city and parish courts of Louisiana employed 157 persons in 1977. Total filings numbered 570,909—of which, two-thirds were traffic cases—and reported expenditures totaled $2,977,671.

Louisiana's 37 district courts process state civil and criminal law violations and, in most jurisdictions, juvenile matters. Juvenile/family courts operate in Caddo, East Baton Rouge, Jefferson and Orleans parishes. Because filings increased from 210,234 in 1968 to 369,379 in 1977, 21 new judgeships have been recommended and/or created during the last two years.

An LCJIS survey of district courts indicated that 657 persons were employed by district courts in 1977. Approximately 64 percent of the filings in 1977 were criminal cases and 36 percent civil cases. The majority of both civil cases (77 percent) and criminal cases (53 percent) were disposed within one to three months. In the four juvenile/family courts 26,598 cases were filed in 1975; 26,861 in 1976; and 26,217 in 1977. Reported expenditures for district courts in 1977 totaled $10,822,414, with juvenile/family courts accounting for $2,705,313.

An LCJIS survey of 35 district attorneys in 1977 indicated that 206 full-time and 40 part-time assistant district attorneys were employed at an average annual salary of $17,474—an increase over 1976 figures which indicated 228 assistant district attorneys with an average annual salary of $13,786.

Specialized units—including narcotics, juvenile, nonsupport, research and appeals, screening desk, courtroom, consumer protection, city/parish court and career criminal/organized crime divisions—were operated and utilized by 43.3 percent of the district attorneys' offices.

To ensure the protection of the rights of those who are financially unable to afford appropriate representation, the 1976 Louisiana Legislature created the Louisiana Indigent Defender Board to coordinate and facilitate the activities of the District Indigent Defender Boards. According to the 1978 Louisiana Indigent Defender Board annual report to the state legislature, $3,055,524 was expended in the defense of indigents between October 1, 1976 and December 31, 1977.

CORRECTIONS

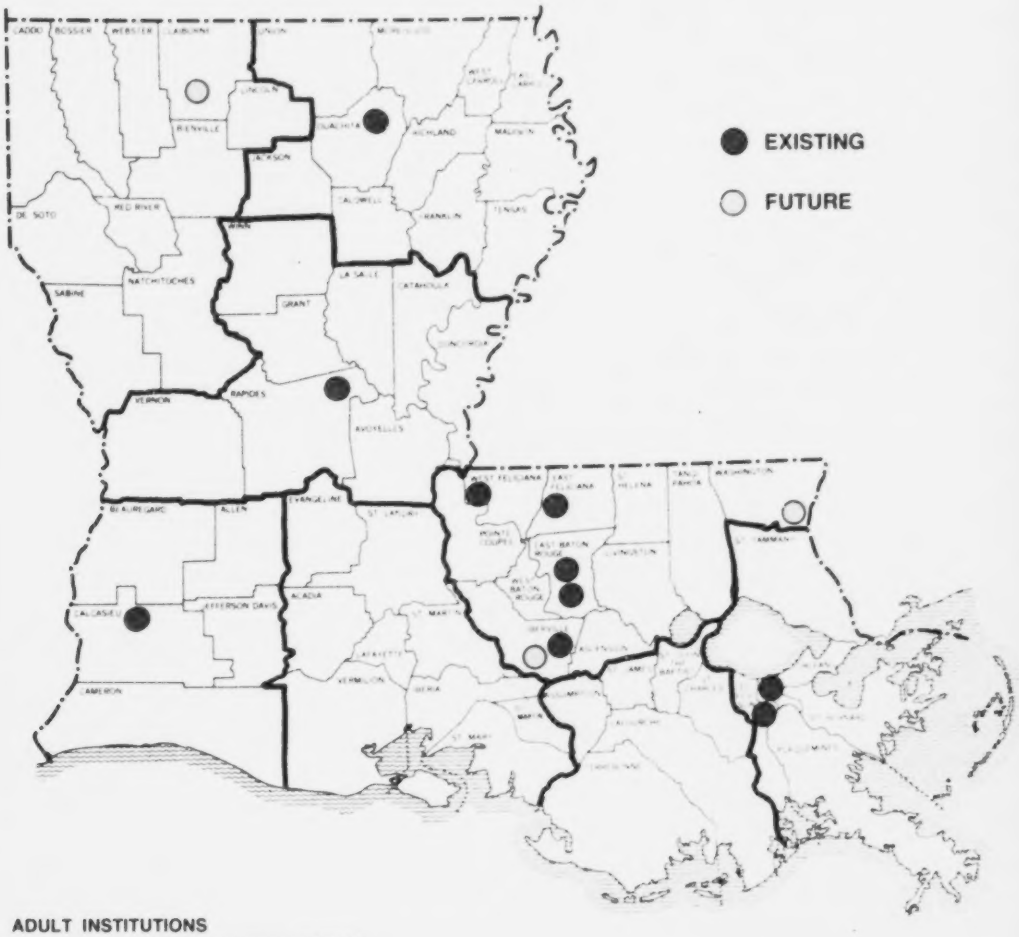
The functions of the Louisiana Department of Corrections include the provision of care and rehabilitative services for the incarcerated and the protection of society from those who cannot be rehabilitated. The department currently administers five adult and five juvenile correctional facilities with a total operating budget of $64 million—fifth largest of all state departmental operating budgets. Operating costs are expected to rise significantly by 1980 as three additional adult institutions are completed and existing facilities are expanded and upgraded. Figure 8-1 shows existing and future correctional facilities in Louisiana.

Adult Corrections

The Louisiana Department of Corrections presently has custody of 7,200 adult offenders. Of the 2,567 adult admissions in 1976-1977 (a decrease of 2.9 percent from 1975-1976), 42.7 percent were first offenders. The average age of adult admissions was 26.2 years, and the average length of sentence was 8.1 years. Burglary and robbery accounted for 43.4 percent of crimes for which offenders were admitted. Approximately 49 percent of adult admissions in 1976-1977 were from four metropolitan parishes (Orleans, 27.1 percent; Caddo, 7.8 percent; Jefferson, 7.1 percent; and East Baton Rouge, 6.5 percent).

Expenditures for adult institutions climbed from $4,734,382 in 1969-1970 to $28,047,887 in 1976-1977. Expenditures for 1977-1978 were projected to increase by approximately 22.2 percent to $34,266,389. The average daily cost per inmate in adult institutions—$2.95 in 1969-1970—was projected to equal $16.09 in 1977-1978.

FIGURE 8-1
LOUISIANA CORRECTIONAL INSTITUTIONS
1978
(EXISTING AND UNDER CONSTRUCTION)



ADULT INSTITUTIONS

1. Louisiana State Penitentiary (Angola)
2. Louisiana Correctional & Industrial School
3. Louisiana Correctional Institute for Women
4. Dixon Correctional Institute/
   Adult Reception and Diagnostic Center
5. Jackson Barracks
6. North Louisiana Medium Security Prison
7. Hunt Correctional Center
8. Washington Parish Correctional Facility

JUVENILE INSTITUTIONS

9. Louisiana Training Institute—Baton Rouge
10. Louisiana Training Institute—Monroe
11. Louisiana Training Institute—Ball
12. Louisiana Training Institute—Bridge City
13. Juvenile Reception and Diagnostic Center

SOURCE: Louisiana State Planning Office from data supplied by Louisiana Department of Corrections.

In 1975 a federal court order requiring stringent housing standards and other mandates was issued against the Louisiana Department of Corrections. Following implementation of a number of changes in the state corrections program, Federal Judge E. Gordon West indicated that the Louisiana Department of Corrections had made great strides toward correcting many of the constitutional violations. However, the federal court will retain jurisdiction in the case until the department's program is in full compliance with the order.

Since 1975 the number of authorized correctional personnel positions has risen from 1,747 to 4,000—an increase of almost 129 percent. Additionally, a full-time training academy for correctional personnel has been established.

The average daily population at the Louisiana State Penitentiary (Angola) decreased by 16.7 percent from 3,293 in 1975-1976 to 2,743 in 1976-1977; however, the present inmate population is 4,009. The inmate capacity of Louisiana Correctional and Industrial School at DeQuincy has been increased, and a new 800-man medium security facility, the Dixon Correctional Institute, has been acquired. (The center at Dixon includes a geriatric unit, a substance abuse program, and a temporary adult reception and diagnostic center.) The Hunt Correctional Center, a 500-man medium security facility and 500-man adult reception and diagnostic center located in St. Gabriel, began receiving inmates in February 1979 and is scheduled for completion in April 1979. Two additional facilities are projected for 1980: the Washington Parish Correctional Center, a 500-man medium security facility and 500-man convalescent unit planned for construction in Bogalusa; and the North Louisiana Medium Security Facility, a 500-man unit scheduled for construction in Claiborne Parish.

Capital improvements for new facilities during the period from 1972 to 1978 totaled $57,555,000; capital projects to improve, repair or renovate existing facilities equaled $58,237,128. More than 90 percent of these expenditures occurred between 1976 and 1978 as a result of the 1975 federal court mandates. All new correctional facilities and repairs to existing facilities meet American Correctional Association standards.

Local prisons in Louisiana continued to hold 800 state prisoners at the end of Fiscal Year 1977. That number reached a maximum of more than 1,800 in March 1978 but had fallen to approximately 1,200 by February 1979. During 1975 and 1976 approximately $4.1 million was paid by the state to local sheriffs and/or local governments for the housing of these inmates.

The Governor's Prison Study Commission estimates that, based upon the present rate of inmate increase, construction of an additional 800-man prison every two years—at a construction cost of $50 million and yearly operating cost of $12-14 million—will be requisite by mid-1980. In February 1979 the commission proposed a plan for increasing the use of parish jails to house certain nonviolent prisoners. The state would aid in financing the upgrading of existing parish facilities and the constructing of new jails and would bear the costs of the new inmate program; nonetheless, the commission foresees possible savings to the state of $100 million in prison construction costs during the next 10 years through implementation of the proposed plan.

Local Prisons

An LCJIS study indicates that $18,157,799 was spent on local corrections in Louisiana in 1977. As of December 31, 1977, 1,272 corrections personnel were employed by local correctional facilities. The jailer-inmate ratio was 1,056-to-4,449, or approximately one jailer to every four inmates. Jailer-inmate ratios ranged from a high of 1-to-1.4 in Bienville Parish, to a low of 1-to-17.7 in Livingston Parish.

As shown in Table 8-5, a number of local prisons are operating above their designed capacities. In 1976, 17 local prisons were functioning with above capacity percentages ranging from 2.5 percent to 283.3 percent; in 1977, 14 prisons were operating with above capacity percentages ranging from 3.9 percent to 96 percent. At present, approximately 23 parish facilities are under court order to make improvements or face possible closure. The court orders will have a marked financial impact at the parish level; additionally, implementation of the commission proposals could have a significant socio-economic effect.

Juvenile Corrections

The most significant action affecting juvenile corrections in the past two years was the legislative decision mandating that effective July 1977 status offenders would no longer be committed to the Department of Corrections. ("Status offenders" are defined as young people who commit offenses that are not considered criminal acts for adults—e.g., runaways, truants, and children termed "ungovernable".) The legislative act was designed to physically separate status offenders from juveniles adjudicated for criminal acts, just as the adult correctional system separates the first offender from the multiple offender.

TABLE 8-5
LOCAL PRISONS OPERATING ABOVE DESIGNED CAPACITY

Parish	1976 Percent Above Capacity	1977 Percent Above Capacity
Acadia	...	22.0
Avoyelles	57.1	96.0
Calcasieu	11.7	...
East Carroll	...	8.6
East Feliciana	85.7	...
Franklin	14.8	...
Iberville	84.4	...
Jefferson	...	23.0
Lafayette	25.9	92.9
Livingston	13.0	89.3
Natchitoches	62.9	...
Orleans	283.3	27.3
Pointe Coupee	6.0	...
Rapides	...	3.9
Sabine	42.9	...
St. Charles	2.5	...
St. Landry	...	15.5
St. Tammany	263.2	9.4
Tangipahoa	265.4	14.0
Terrebonne	96.5	...
Vernon	...	8.8
Washington	50.0	27.8
West Baton Rouge	40.0	...
West Carroll	...	13.6

SOURCE: Louisiana Commission on Law Enforcement, Louisiana Criminal Justice Information System Division.

Many juvenile offenders now never come into contact with the Department of Corrections. Services such as probation and community-based treatment facilities are provided by the Office of Youth Services (Department of Health and Human Resources), city and district courts, and local private and governmental organizations.

The Department of Corrections presently has 968 juvenile offenders in custody. In 1976-1977 the average age of juvenile admissions was 15. Burglary and shoplifting were the most numerous offenses, 29.4 percent and 19.6 percent, respectively. Three urban parishes accounted for 38.1 percent of juvenile admissions in 1976-1977 (Orleans, 18.2 percent; Caddo, 11 percent; and East Baton Rouge, 8.9 percent).

State expenditures for juvenile correctional institutions increased from $3,264,546 in 1969-1970 to $8,106,160 in 1976-1977 and were projected to increase to $8,876,549 in 1977-1978—a 9.6 percent increase. The average daily cost per student in juvenile correctional institutions rose from $9.34 in 1969-1970 to an estimated $31.26 in 1977-1978.

Rehabilitation Activities

Educational achievement levels for most adult and juvenile inmates are low: sixty percent are classified as functional illiterates. The average grade level for adult admissions in 1975-1976 was 4.1. In that same period, reading and math levels for juvenile admissions averaged just above fifth grade. In 1976-1977 these juvenile achievement levels had fallen to fourth grade.

In light of low achievement levels, many recent Department of Corrections rehabilitation efforts have focused on the education and training of inmates. The use of inmate instructors has been eliminated and full complements of certified teachers have been established at adult institutions. College courses leading to associate degrees in general studies have been initiated for adult inmates. Modern learning laboratories for improvement in reading and math skills have been acquired, and vocational training programs have been improved.

Pardon, Parole and Probation

Between January 1976 and June 1977 the Louisiana Board of Pardons received over 1,900 applications for pardons and commutations of sentences. The board heard and disposed 487 cases between January and June 1976, of which 49.8 percent were granted, 46 percent were denied and 4.2 percent were taken under advisement. In Fiscal Year 1976-1977 the board heard and disposed 1,292 cases, of which 33.2 percent were granted, 62.6 percent were denied and 4.2 percent were taken under advisement.

During 1975-1976 and 1976-1977 the Louisiana Board of Parole held 5,200 hearings—a majority of which (88 percent) were automatic parole reviews. Of the total number of hearings, revocation hearings for parole violators increased from 2.5 percent to 9.5 percent and work release hearings decreased from 8.7 percent to 0.3 percent. The percentage of cases granted dropped from 40.6 percent in 1975-1976 to 28.3 percent in 1976-1977; the percentage of paroles revoked increased from 2.2 percent to 7.9 percent.

The Division of Probation and Parole in the Department of Corrections supervises adult offenders who are placed on probation, released on parole, transferred to Louisiana under terms of the interstate compact or placed on the state work release program. The division supervised an average total of 12,530 cases in 1975-1976 and 13,169 cases in 1976-1977. In both years an overwhelming majority of cases were probation cases. The current number of cases under supervision averages 15,000 with 12,251 probation and 1,925 parole cases. The average number of work release cases dropped from 111 in 1975-1976 to 42 in 1976-1977. Thirty-one state prisoners are currently participating in the work release program. As a result of Act 770 of the 1978 Louisiana Legislature (which amended statutes relative to inmate work release), the number of prisoners in the work release program is expected to increase.

Recidivism

In criminal justice parlance, "recidivism" denotes a return to criminal behavior. "Recidivism rate" is defined as the percentage of released offenders who return to prison within a specified period of time.

The most recent figures on the recidivism rate in Louisiana released by the Department of Corrections are for 1974. The 1974 rate, computed on the basis of twelve months, was 13 percent. This rate, however, does not give a valid picture of the current recidivism problem in Louisiana.

As of July 1978, only 39.1 percent of the total number of persons in custody of the Department of Corrections were classified as first offenders; 60.9 percent of that total population were repeat offenders or recidivists. In Fiscal Year 1975-1976, 54.9 percent (or 1,450) of the new admissions were repeat offenders; in Fiscal Year 1976-1977, 57.3 percent (or 1,472) of the new admissions were repeat offenders. Because data do not specify the length of time individuals are out of

custody, the figures cannot be considered an indication of the recidivism rate. The figures do, however, verify the need for serious attention to the recidivism problem.

The Governor's Pardon, Parole and Rehabilitation Commission has concentrated on determining specific and immediate needs of the released inmate with the hope of introducing programs to influence the behavior of released offenders and subsequently to reduce recidivism. A major effort to identify a possible correlation between a successful return to free society and the ability to get and hold a job has been initiated. Recognizing the importance of preparing inmates for release, the Department of Corrections plans to institute a prerelease program at the new Hunt Correctional Center.

COST OF THE CRIMINAL JUSTICE SYSTEM

The most recent comprehensive statistics reflecting criminal justice expenditures are those issued for Fiscal Year 1976 by the Law Enforcement Assistance Administration (LEAA). According to LEAA, per capita direct expenditure for criminal justice activities of state and local governments averaged $80. In Louisiana the per capita direct expenditure was $73.

Table 8-6 shows the distribution of total criminal justice system expenditures in Louisiana during Fiscal Year 1976. Criminal justice system outlays accounted for 9 percent of Louisiana's total (state and local governments) general expenditures—just under the national average of 9.1 percent.

CONCLUSION

While statistics reported to law enforcement agencies may show an increase in the rate of crime, specific causes for such an increase are difficult to isolate. Crime rate reflects only the numerical factor of population. Other components that influence the number and types of crimes in a given area—e.g., density and variation in composition of population, transient factors affecting stability of population, economic and cultural conditions, effective strength of law enforcement agencies, and changes in crime reporting practices of the citizenry and law enforcement agencies—are not considered.

Analysis of the crime problem reveals an interassociation of crime with numerous socioeconomic factors. The low educational

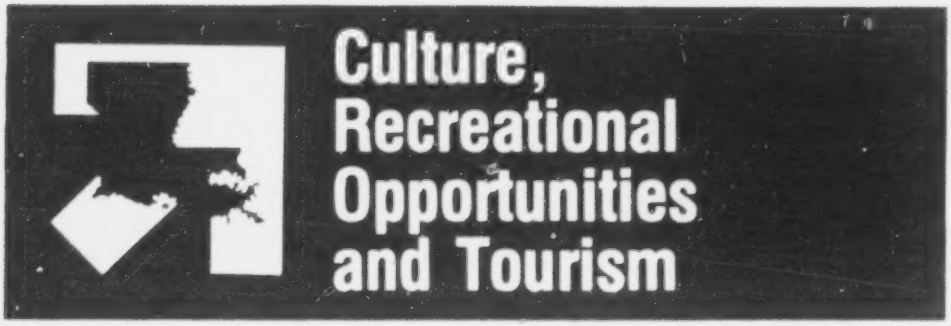
TABLE 8-6
DISTRIBUTION OF LOUISIANA CRIMINAL JUSTICE SYSTEM TOTAL EXPENDITURE, FY 1976*

	Amount (thousands)	Percent Total
Police Protection	161,364	57.6
Judicial	37,962	13.6
Legal Services and Prosecution	14,547	5.2
Public Defense	1,581	0.6
Corrections	63,112	22.5
Other Criminal Justice	1,568	0.6
Total Criminal Justice	280,134	100.3†

SOURCE: U.S. Department of Justice, Law Enforcement Assistance Administration, National Criminal Justice Information and Statistics Service.

*Total state and local governmental general expenditures, excluding duplicative intergovernmental expenditure amounts.
†Total does not equal 100% due to rounding of percentage figures.

achievement level of most Louisiana inmates, the high incidence of repeat offenders and the high arrest rate for racial minorities support this concomitant relationship. Thus, the problem of crime cannot be divorced from other facets of Louisiana's society. Rather, any consideration of crime and its prevention must encompass many socio-economic factors.



Chapter 9

The diverse natural and cultural resources of Louisiana provide both residents and tourists with bountiful opportunities to enrich their lives. Louisiana's unique culture, history and natural landscape have engendered unusual art forms, exceptional historical attractions and myriad outdoor activities—attributes which have encouraged the development of a thriving tourist industry.

CULTURE

Louisiana's rich cultural heritage—a potpourri of nationalities, customs and languages—lives today in ethnic humor, music, dance and art; expressive patois; regional cuisines; and indigenous architectural styles. Recognizing the value of such elements in enhancing the life-style of citizens, the State of Louisiana has underwritten programs to develop both cultural resources and art activities.

The Arts

Louisiana has received national acclaim for its reorganization of the state arts agency. Created in 1977, the Division of the Arts (DOA) within the Office of Program Development in the Louisiana Department of Culture, Recreation and Tourism has made significant progress in establishing a program that will stimulate and support the development of Louisiana's cultural resources.

In cooperation with the arts constituency in the state, the Division of the Arts developed a state plan of funding requirements for the arts in Louisiana. The plan focuses on four main types of support: Community Arts Project Assistance, Touring Arts Resources, DOA Special

Services and Challenge Grants. These four categories simultaneously address the needs of major cultural institutions and programs having statewide impact and less sophisticated grass roots organizations.

Programs administered by the Division of the Arts have enabled thousands of Louisianians to experience and enjoy diverse cultural activities. For example, in the past two fiscal years, over 250 projects made possible through the Federal/State Partnership Arts Grant Program have reached more than 1.7 million Louisiana citizens. The Artist-in-Schools Program, which places professional artists in schools, has involved over twenty schools and 40,000 students. The Dance Touring Program, funded by the National Endowment for the Arts and coordinated statewide by the Division of the Arts, has placed leading National Dance Companies in Louisiana for workshops and special performances. These companies have performed before more than 20,000 students, instructors and theatre patrons over the last two years. A new Community Development Program designed and funded through the division provides direct programmatic support to recognized Community Arts Councils in Louisiana. Programs of local arts agencies reach a combined population of 1,250,000 persons and encompass senior citizens, the handicapped, ethnic groups, school children and groups which would not otherwise have access to cultural opportunities.

It is estimated that funded projects in Fiscal Year 1979 will reach over 2 million Louisianians in 58 parishes and will generate approximately $2 million at the local level—a ratio of 2-to-1 over grant dollars provided from federal and state sources.

The comprehensive support and programming scope of the Division of the Arts is proving to be a tangible nucleus for cultural growth in Louisiana. In addition, it affords a strong foundation for future state planning in the arts.

Historical and Cultural Heritage

Blessed with a uniquely rich culture, the State of Louisiana has a particular responsibility to support programs designed to preserve, protect and enhance those elements which have contributed to Louisiana's distinctive heritage. And, importantly, the state has improved significantly its public image in the field of historic preservation. Louisiana is now recognized by preservationists as a responsible partner in diverse efforts to preserve the past.

Archaeology and Historic Preservation

The Division of Archaeology and Historic Preservation within the Office of Program Development in the Department of Culture, Recreation and Tourism provides state level administration for four key programs: National Register of Historic Places, Grants-in-Aid for Historic Preservation, 1976 Tax Reform Act Certifications and State Archaeological Landmarks.

Since 1972 the number of Louisiana properties placed on the National Register of Historic Places has increased from 27 to 156; sixteen additional nominations are pending final federal approval. During the same period 87 Grants-in-Aid for Historic Preservation totaling $1,594,788 were awarded to individuals, local organizations and local governments. In addition, Louisiana leads the nation with 61 certifications of eligibility for tax reductions (authorized by the Tax Reform Act of 1976) for income-producing properties that contribute to the integrity of a historic district listed on the National Register.

The state has provided guidelines for substate districts in the task of indexing the state's archaeological sites and buildings over 50 years of age. The total number of such cultural resources is estimated at 50,000.

Louisiana currently has seven State Archaeological Landmarks. The following major archaeological excavations have been completed: Poverty Point Commemorative Area, U. S. Mint in New Orleans, Tunica Indian Village on the Angola State Penal Farm, Fort Pike State Commemorative Area, and Coles Creek Cultural Indian Mound at the new Department of Corrections reception facility at St. Gabriel.

Amateur archaeologists around the state, particularly the 300 members of the Louisiana Archaeological Society (LAS), receive technical advice, guidance and encouragement from the State Archaeologist. On-site training is also supplied during the annual field workshops sponsored by LAS.

A broad campaign of public education has fostered in many Louisianians an awareness of cultural resources. The Division of Archaeology and Historic Preservation has initiated both a series of popular publications to illuminate major historic events for the general citizenry and a series of technical publications to provide more detailed information for dedicated amateur and professional archaeologists and historians. Additionally, a present total of 245 historical highway markers acknowledge significant events and locations throughout the state.

Living Historic Preservation

An integral design in the rich tapestry of Louisiana's past is the French culture which has survived since the earliest days of discovery, exploration, settlement and later migration from France, the Dominican Republic and Nova Scotia.

The 1970 Census of Louisiana revealed that 22 percent of the population in 20 south Louisiana parishes speaks and understands French. In two rural parishes 75 percent of the population is French-speaking; and in Lafayette Parish, an urban parish, 52 percent of the population speaks French.

The Council for the Development of French in Louisiana (CODOFIL) is the state entity responsible for the development, utilization and preservation of the French language in Louisiana (Act 409, Louisiana Legislature). Programs administered by CODOFIL represent living historic preservation and benefit thousands of Louisianians annually.

Louisiana State Museum

The Louisiana State Museum was established by the State Legislature in 1906 for the purpose of collecting, preserving and presenting materials which illustrate the historic development of Louisiana and its people. Between 1906 and 1972 the museum acquired eight historic properties in the French Quarter of New Orleans and amassed a collection of Louisiana materials that is exceptional.

In 1973 a reorganization of the State Museum Board and the museum staff was undertaken. Based on nationally recognized standards, the reorganization introduced professional criteria and procedures, initiated preservation and exhibition programs, and upgraded and expanded educational and outreach programs. As a result, the museum earned accreditation from the American Association of Museums in 1976.

The Louisiana State Museum performs three primary functions: acquisition (through donations and purchases) of significant additions to the institution's collections, preservation of the collections, and presentation of the collections as informational and educational resources.

Since 1973 the number of museum acquisitions has increased dramatically while the quality has simultaneously improved. Important recent additions include the collection of the New Orleans Jazz Club (with an estimated value of $175,000) and the Chinese art collections of Madame Anna Chennault (with an estimated value of $3,000,000).

The museum's first major conservation program was initiated in 1974. By 1978 restoration of 130 paintings, 14 pieces of furniture and more than 3,000 documents had been completed.

The museum's eight buildings (Madame John's Legacy, The 1850 House, The Old U. S. Mint, The Jackson House, The Arsenal, The Creole House, The Cabildo and The Presbytere), considered part of the collection, have great historic value. Since 1972 the state has committed more than $4.5 million for the capital improvement of the eight properties. By the end of 1979, all of the buildings will have been restored and adapted for educational as well as revenue producing purposes.

The museum's acquisition and conservation programs serve as the foundation for the most visible services provided by the institution—research, information and presentation. The delivery of these services has increased markedly since 1972 (Table 9-1).

Museum activities are extensive in scope, quite diverse and include the following: research on a broad range of topics related to Louisiana history; preparation of exhibits; provision of information to the general public, scholars, the news and entertainment media, and both domestic and foreign governmental agencies; provision of consultant services for Louisiana museums and preservation groups; support of a publications program; and administration of a lending program for museum holdings.

TABLE 9-1
LOUISIANA STATE MUSEUM PERFORMANCE INDICATORS

	1973	1978
Permanent Exhibitions	5	15
Temporary Exhibitions	3	4
Number of Acquisitions		
Donations	657	3,300
Purchases	. . .	83
Number of Restorations		
Contract	. . .	38
In-House	150	235
Federal Grant Monies Obtained	. . .	$70,268
Lectures	13	120
Public Information Contracts	87	16,000
Attendance	315,737	290,000

SOURCE: Louisiana Department of Culture, Recreation and Tourism, Office of the State Museum.

Since 1972, 182,000 Louisiana students have toured museum properties. In addition, both adults and students have participated in formal educational programs developed by the museum (with the aid of the museum's associate group, the Friends of the Cabildo).

Historic and Official Documents

Although the law requiring the listing of Louisiana state documents was not enacted until 1948, bibliographic coverage of official Louisiana documents dates from 1803. In 1978 the Louisiana Legislature transferred responsibility for the listing of state documents from the Department of State to the Louisiana State Library.

The State Recorder of Documents compiles and publishes a semiannual list of Louisiana state documents and places all official publications in depository libraries located throughout the state. All official publications are preserved by the depositories and made accessible to users. Of the 40 Louisiana libraries serving as depositories, 14 are complete depositories and receive copies of all state publications. The Louisiana State Library and the Louisiana State University Library in Baton Rouge are designated as historical collection depositories.

In 1977 an original copy of the Louisiana Purchase—one of only three such documents extant—was loaned to the State of Louisiana. This document will be displayed in an interpretive center to be constructed by the Office of State Parks at the proposed Fort St. Jean Baptiste State Commemorative Area in Natchitoches, Louisiana.

Library Services

Libraries have figured prominently in the cultural history of Louisiana since the early 1800's when at least four "library societies" were formed to circulate material. This initial interest in libraries has continued and expanded statewide. Louisiana citizens now have access to 64 public libraries (including parish, city and regional facilities), 35 academic libraries (14 private and 21 public institutions), approximately 2,000 public and private school libraries, and over 100 special libraries.

Since 1925 the Office of Louisiana State Library within the Department of Culture, Recreation and Tourism has been responsible for planning and implementing a coordinated system of parish and regional libraries capable of providing every resident of the state with free library service of the highest quality. At present, the State Library

has completed the development of four regional information networks to serve 35 parishes. Future development of three additional regional networks is needed to facilitate the library's services.

A new program of the State Library implemented during Fiscal Year 1978-1979—administration of a $1.5 million appropriation—should have a substantial impact on every citizen of the state. The money is to be distributed on a per capita basis to every parish for the purchase of books, periodicals, newspapers and audio-visual materials to update and expand local collections.

The State Library operates as a resource center for other libraries and is directly accessible to state employees. Most of its transactions are initiated by requests from citizens through local parish libraries. During 1977-1978 State Library employees responded to requests for 79,000 books; 22,000 films; 35,000 recordings; and 80,000 recorded books for the blind and physically handicapped. Reference librarians answered over 85,000 separate requests for information received by mail, telephone and teletype.

In late September 1978 the Louisiana Governor's Conference on Libraries and Information Services was held in Baton Rouge. One hundred citizens and fifty librarians and library trustees assembled to discuss the past, present and future of libraries. Resolutions from the conference will be carried to a White House Conference in Washington in October 1979 by 10 elected Louisiana delegates. These representatives will participate in the formulation of a national plan to improve library services at the local, state and national level.

Economic Impact of Cultural Development

The economic impact of cultural activities and resources is frequently indirect. For example, state cultural agencies have fostered economic growth by generating and dispersing federal funds which stimulate jobs and cash flow at the local level. State and federal programs work to create and preserve an attractive and historic environment conducive to the development of cultural resources. In turn, the development of cultural resources can stimulate tourism and enhance the attractiveness of locations for new businesses, industries and homes.

The direct economic impact of cultural resources was vividly affirmed by the 1977 Treasures of Tutankhamun exhibit at the New Orleans Museum of Art. A total of 870,595 persons viewed the exhibit, more than 600,000 of whom were out-of-town visitors who contributed $89,028,271 to the New Orleans economy. Since more than 76 percent of the visitors came to New Orleans primarily to see King Tut,

total specifically Tut-generated expenditures are estimated at $69,432,364. A breakdown of expenditures and tax revenues generated by Tut tourists is shown in Table 9-2.

TABLE 9-2
VISITOR EXPENDITURES AND TAX REVENUES GENERATED BY 1977 KING TUT EXHIBIT

Category	Visitor Expenditures (millions)	Total Tax Revenues	State	City	Superdome	School Board	City Welfare
Food and Beverage	$21.7	$1,228,302	$ 614,151	$ 409,434	.....	$204,717	.....
Lodging	19.2	1,086,792	.....	181,132	$724,528	181,132	.....
Retail Merchandise	17.3	979,246	489,623	326,415	.....	163,208	.....
Entertainment	7.8	772,974	210,811	140,541	.....	70,270	$351,351
Ground Transportation	3.4	.....	.....	.....	.....	.....	.....
Total	$69.4	$4,067,314	$1,314,585	$1,057,522	$724,528	$619,328	$351,351

SOURCE: E. C. Nebel, III and E. John Bullard, "The Economic Impact of King Tut," **Louisiana Business Survey,** Vol. 9, No. 4 (October 1978).

OUTDOOR RECREATION

State Parks and Recreational Areas

By protecting areas of unique scenic beauty or national significance, preserving elements of the state's rich cultural heritage, and providing necessary recreational opportunities for both residents and visitors, the state parks system holds the potential for becoming one of Louisiana's most outstanding assets. Louisiana's state parks system will serve more than six million people during 1978—an increase of approximately one million users since 1972.

In 1972 Louisiana ranked fiftieth in state park acres per capita, having at that time a total of 14,356 acres. Since that time acreage in state parks has almost doubled, and the Office of State Parks now administers 46 separate holdings with a combined total of 27,338 acres. The Office of State Parks plans to increase state parks holdings to over 50,000 acres by 1990.

The preparation of a fifteen year master plan in 1973 and the subsequent authorization by the 1975 Louisiana Legislature of approximately $113 million in general obligation bonds for state parks acquisitions and improvements have had a profound effect on the state parks system. Further, if implemented according to schedule, the master plan will place Louisiana among the top state parks systems in the nation by 1990.

The master plan presents a comprehensive set of criteria to be met by future acquisitions and establishes a classification system with five categories: State Preservation Areas, State Preservation Sites, State Commemorative Areas, State Parks and State Experimental Sites.

The action program of the state parks system consists of three distinct development phases: "Now" (1975 to 1980), "Next" (1980 to 1985) and "Future" (1985 to 1990). The program addresses both improvement of existing holdings and acquisition of new sites. Figure 9-1 shows the statewide distribution of the action program.

In early 1976 a $5 million line of credit was issued to initiate planning for a number of the proposed park improvements. An additional $14 million was authorized in 1977 to begin land acquisition and improvements on high priority projects. Twenty-six projects were funded and implemented in 1977.

In addition to these funds, the Louisiana Legislature has underwritten the State Parks Improvement Program with appropriations of $81,000 in Fiscal Year 1975-1976; $97,000 in Fiscal Year 1976-1977; and $93,757 in Fiscal Year 1977-1978.

The Office of State Parks strives to make maximum use of available federal funds. Authorization for federal cost-share assistance in the amount of $1,173,000 has been received for six projects. The funding of the Port Hudson State Commemorative Area marks the first occasion for the use of Federal Highway Administration Great River Road Funds for a project of this type in Louisiana. Construction of the project is expected to begin in late 1978 with an estimated cost of approximately $1.5 million, 70 percent of which will be made available through the federal government.

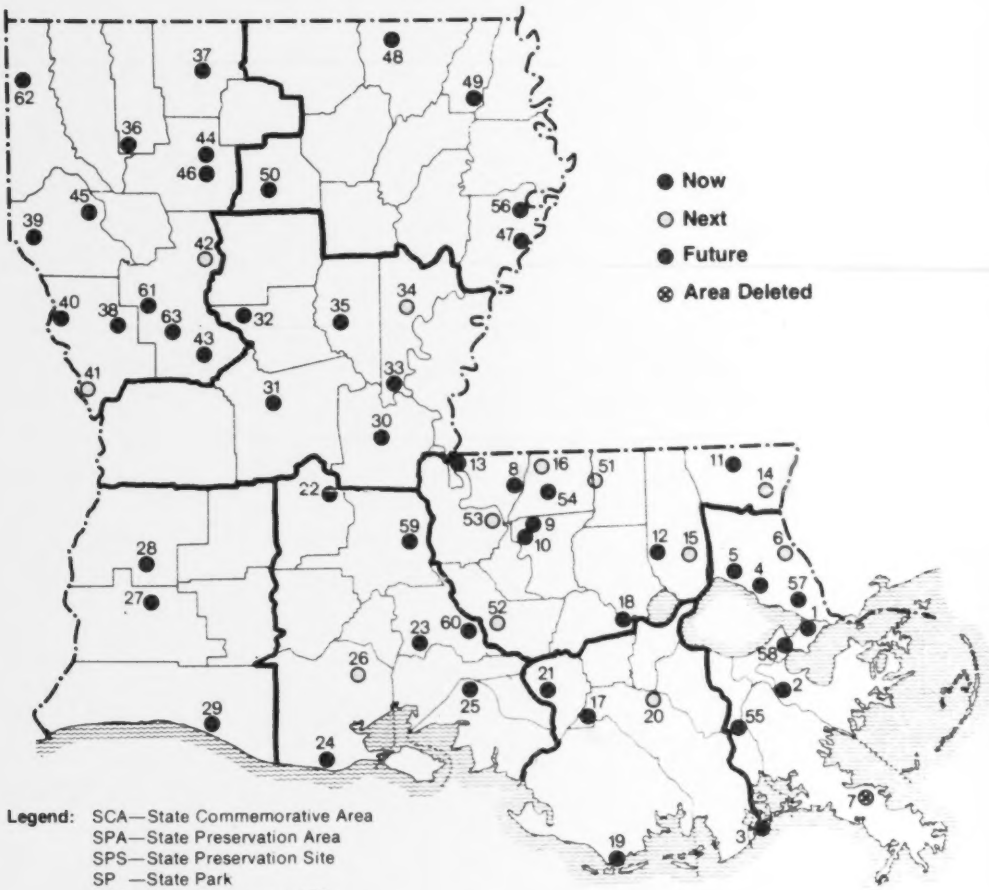
Outdoor Recreation Planning and Development

The Division of Outdoor Recreation within the Office of Program Development in the Department of Culture, Recreation and Tourism is responsible for administering the Land and Water Conservation Fund and the Statewide Comprehensive Outdoor Recreation Plan.

Land and Water Conservation Fund

In the past year federal Land and Water Conservation Funds were obligated to 63 recreational projects, bringing the total number of Louisiana projects to 408. Since 1965, $35,915,000 in federal funds has been apportioned to Louisiana and obligated for the acquisition and development of outdoor recreation at the local, parish and state

FIGURE 9-1
LOUISIANA STATE PARKS SYSTEM: ACTION PROGRAM



Legend: SCA—State Commemorative Area
SPA—State Preservation Area
SPS—State Preservation Site
SP —State Park
SES—State Experimental Site

1. Fort Pike SCA
2. St. Bernard SP
3. Grand Isle SP
4. Fontainebleau SP
5. Fairview-Riverside SP
6. Pearl River Waterway SP
7. Fort Jackson SCA
8. Audubon SCA
9. Port Hudson SCA
10. Faulkner's Lake SES
11. Parish SPS
12. Tickfaw SP
13. Tunica Hills SPA
14. Bogue Chitto SP
15. Chappepeela SP
16. Lost Creek SP
17. E. D. White SCA
18. McElroy Swamp SPA
19. Isles Dernieres SPA
20. Lac Des Allemands SP
21. Lake Verrett SP
22. Chicot SP
23. Longfellow-Evangeline SCA
24. Cheniere-Au-Tigre SP
25. Lake Fausse Pointe SP
26. Palmetto Island SPA
27. Sam Houston SP
28. Beckwith-Hickory SPA
29. Cheniere SPA
30. Marksville SCA
31. Kent House SCA
32. Coochie Brake SPA
33. Larto Lake SP
34. Harrisonburg SPA
35. White Sulphur Springs SP
36. Lake Bistineau SP
37. Lake Claiborne SP
38. Fort Jesup SCA
39. Mansfield SCA
40. N. Toledo Bend SP
41. S. Toledo Bend SP
42. Black Lake SP
43. Ft. St. Jean Baptiste SCA
44. Driskoll Mountain SPS
45. Lake Edwards SP
46. Saline Bayou SP
47. Lake Bruin SP
48. Chemin-A-Haut SP
49. Poverty Point SCA
50. Caney Creek Lake SP
51. Amite River SP
52. Iberville SP
53. Pointe Coupee SP
54. Centeneria SCA
55. Lafitte SP
56. Winterquarters SCA
57. Slidell SP
58. New Orleans East SP
59. West St. Landry Lake SP
60. Atchafalaya Basin SP
61. Los Adais SCA
62. Monterey SP
63. Rebel SCA

SOURCE: Louisiana Department of Culture, Recreation and Tourism, Office of State Parks.

level. This figure represents over $72 million spent on recreation in Louisiana, since the Land and Water Conservation Fund is a 50 percent reimbursement assistance program. Programs and facilities financed by these monies have promoted construction growth, attracted tourism and recreation dollars, and provided more numerous and better quality recreational opportunities statewide.

Statewide Comprehensive Outdoor Recreation Plan

Louisiana's Statewide Comprehensive Outdoor Recreation Plan (SCORP) has been selected as both the model SCORP plan for all other states and the model for the federal government's National Outdoor Recreation Plan.

The first of two SCORP elements is published on a five-year basis. Entitled **Part 1: Information Base of Executive Decision** (IBED), the document represents as complete a compilation of the relevant data pertaining to the provision of outdoor recreation in Louisiana as is presently possible and provides the basis for the preparation of **Part 2: The Annual State Action Program** (ASAP). The primary function of the second document—which is prepared on a yearly basis to ensure that it remain current and address issues of the highest priority—is to direct the creative implementation of outdoor recreation projects.

Outdoor Activities

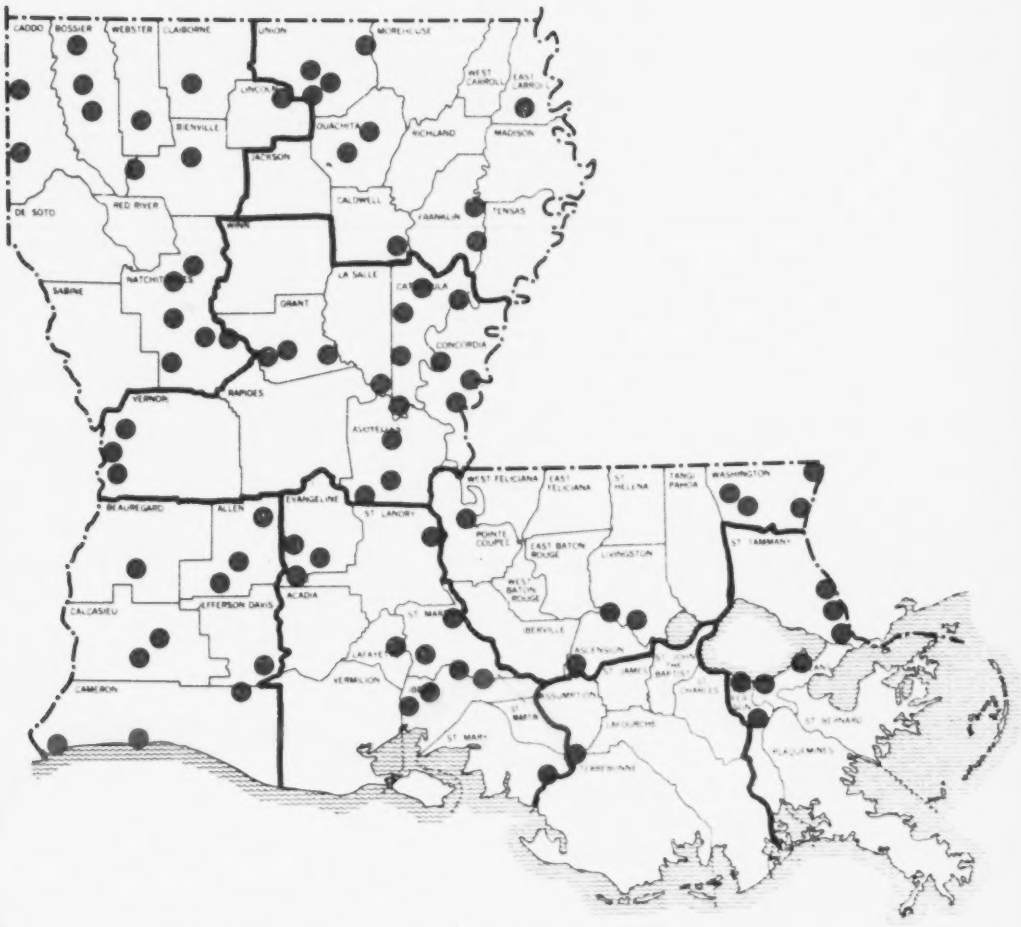
Louisiana's abundant water and wildlife resources attract both resident and nonresident sportsmen. In the 1976-1977 season 411,160 resident and 39,989 nonresident sport fishing licenses; 349,753 resident and 11,627 nonresident sport hunting licenses; and 152,998 resident and 2,119 nonresident big game licenses were sold for total license fee receipts of $3,783,518. In the 1977-1978 season state receipts totaled $998,589 for angling licenses; $2,394,389 for hunting licenses; and $325,540 for motorboat registration fees.

Water Activities

Water skiing, fishing (both freshwater and saltwater), boating and canoeing comprise the most popular water based activities in the state. Louisiana has approximately 1.8 million water acres suitable for recreation. Forty-four rivers or segments thereof are designated as "natural and scenic rivers". The state currently provides 82 public, fee-free launch ramps under the jurisdiction of either the Louisiana Department of Wildlife and Fisheries, the Army Corps of Engineers or parish police juries. The distribution of these launch areas is shown in Figure 9-2.

FIGURE 9-2

LOUISIANA PUBLIC BOAT LAUNCH SITES



SOURCE: Frank Davis, "So You Need a Place to Launch?" **Louisiana Conservationist,** Vol. 29, Nos. 3 and 4 (March-April 1977).

Since 1972 one of the major programs in the fisheries section of the Department of Wildlife and Fisheries has addressed the development of the striped bass fishery in the state. Over the past six years, more than 8 million striped bass fingerlings have been released in Louisiana's larger reservoirs and natural lakes, including Toledo Bend and D'Arbonne lakes. In addition, more than 1.25 million hybrid striped bass have been released in other lakes. Pure striped bass weighing over 30 pounds and hybrid stripers weighing over 8 pounds are now being taken by many Louisiana sport anglers.

The fisheries section also operates three hatcheries containing 46 production ponds for stocking purposes. These hatchery units have produced well over 3 million black bass and 18 million bluegill fingerlings in the past six years and represent one of the department's most popular programs of service to the people of Louisiana. The fish stocking program is estimated to have increased recreational fishing by 118,000 man-days, with a recreational benefit of $5.5 million annually to ponds alone, and $5 million to state lakes and reservoirs.

Natural Area Activities

The Game Division of the Department of Wildlife and Fisheries supervises and controls 35 wildlife management areas (Figure 9-3) for public use in hunting, fishing, trapping, camping, boating, picnicking, birdwatching, outdoor photography and general outdoor recreation. Land areas under intense management for wildlife and public use now total 800,000 acres, of which 265,000 acres are owned by the state in fee title. Efforts to acquire lands with suitable habitat for further serving the growing demands of citizens for outdoor recreation were intensified during the past six years. Since 1972, 76,000 acres of wildlife habitat have been purchased and opened to public use. Just over $12 million was spent during this period to acquire choice wildlife habitats and dedicate those lands to public use.

Resident and tourist hours spent on wildlife management areas are estimated to equal between 6 and 7 million man-days a year. The economic contribution of wildlife management areas to the state extends beyond the $82.5 million figure attributed to game hunting; wildlife management areas accommodate many persons with no interest in hunting—persons who seek natural areas for other recreational uses. The attendant economic spinoffs of these wildlife management areas far exceed $100 million.

TOURISM

The tourist industry is a major productive sector of the United States economy, and tourism in Louisiana continues to rank third in dollar value among all industries.

Tourist Attractions

New Orleans remains one of the great tourist attractions in the United States, but popular points of interest are scattered throughout

FIGURE 9-3

WILDLIFE MANAGEMENT AREAS IN LOUISIANA

SOURCE: Louisiana Department of Wildlife and Fisheries, **A Guide to Wildlife Management Areas.**

the state. According to the Office of Tourism, more than 60 of Louisiana's mansions are now open for tours. More than 80 art and historical museums and 12 major public gardens, ranging in variety from the national gardens of the American Rose Society in Shreveport to the tropical gardens along the Gulf, are located throughout the state. Five major thoroughbred and quarter horse racetracks are available for racing enthusiasts; and Louisiana boasts scores of excellent freshwater and saltwater fishing spots including Toledo Bend, the Atchafalaya Basin and Grand Isle. In addition, the state offers five

huge divisions of Kisatchie National Forest, one state forest, and more than 20 State Parks and State Commemorative Areas. For lagniappe there are 100 major annual festivals, the State Fair in Shreveport and the various parish fairs, and the Cajun-style, Southern-style, and New Orleans-style foods and music for which Louisiana is world-famous.

Tourists in Louisiana

In 1977, 74,438 foreign tourists visited the network of Louisiana Tourist Information Centers and signed the guest registers. The number had grown to 131,765 by 1978 (an increase of approximately 77 percent). Many tourists do not visit the centers, and others visit without signing the registers; but the figures are considered to be good indicators of industry growth.

As indicated in Table 9-3, a total of 1,235,614 tourists (foreign and domestic) visited Louisiana Information Centers in 1977, and 2,222,389 (an increase of approximately 80 percent) signed the registers in 1978. The new center which opened in Slidell in 1978 registered 667,165 visitors in its first seven months of operation.

TABLE 9-3
GUEST REGISTRATIONS AT LOUISIANA TOURIST INFORMATION CENTERS, 1976-1978

Location	1976	1977	1978
State Capitol	156,569	142,230	131,535
New Orleans	106,092	142,721	207,335
Shreveport	107,187	115,986	111,549
Pearl River	266,972	345,076	484,764
Vinton	258,194	371,898	458,796
Kentwood	123,784	83,138	96,376
Toledo Bend	12,485	21,473	23,068
Vidalia	8,238	9,577	10,947
Bastrop*	.....	3,515	5,864
Slidell†	.....	.....	667,165
St. Francisville†	.....	.....	24,990
TOTALS	1,039,998	1,235,614	2,222,389

SOURCE: Louisiana Department of Culture, Recreation and Tourism, Office of Tourism.

* Opened in 1977.
† Opened in 1978.

Written inquiries generated by Louisiana's annual national advertising campaigns are answered by the Inquiry Department of the Louisiana Office of Tourism in Baton Rouge; 126,300 inquiries were received and answered in 1976. By 1977 the Inquiry Department was handling 700 inquiries per day for an annual total of 184,279 (a 45.9 percent increase over 1976). In peak seasons that department has received over 5,000 written inquiries per day, in addition to the annual average of 40 telephoned inquiries per day.

Economic Impact of Tourism

According to figures released recently by the U.S. Travel Data Center in cooperation with the U. S. Bureau of the Census, travelers spent $1.8 billion in Louisiana in 1976. Based on that figure, it is likely that Louisiana enjoyed a tourism income of $2 billion in 1977 and should move toward $2.5 billion in 1978.

The U.S. Travel Data Center has also released the following figures for 1976. Louisiana's travel industry provided Louisiana citizens with $415 million in payroll income, or 3.4 percent of Louisiana's total "labor and proprietors income"—well above the national average of 2.5 percent. Travel spending directly generated 71,000 jobs in Louisiana, or 5.5 percent of the state's total nonagricultural jobs—a figure higher than the national average of 5.1 percent. Furthermore, travel expenditures in Louisiana generated $71 million in state tax revenue and $44.7 million in local tax revenue (4.3 percent of all state tax revenue and 11.2 percent of all local tax revenue). The national average of local tax revenue generated by travel is only 2.1 percent.

Table 9-4 shows the economic impact of travel by parish in Louisiana for 1976.

TABLE 9-4
ECONOMIC IMPACT OF TRAVEL IN LOUISIANA, 1976

	Travel Expenditures (thousands)	Travel Payrolls (thousands)	Travel Employment (Jobs)	State Tax Receipts (thousands)	Local Tax Receipts (thousands)
STATE TOTAL	$1,814,444	$415,424	71,243	$71,200	$44,767
Parish Listing					
Acadia	3,832	729	137	150	73
Allen	1,146	187	31	45	18
Ascension	5,045	951	167	198	134
Assumption	502	8	15	20	14
Avoyelles	2,463	424	74	97	48
Beauregard	3,360	633	118	132	64
Bienville	661	125	23	26	13
Bossier	25,976	6,218	922	1,019	476
Caddo	87,300	20,485	3,314	3,426	1,722

TABLE 9-4—*Continued*

	Travel Expenditures (thousands)	Travel Payrolls (thousands)	Travel Employment (Jobs)	State Tax Receipts (thousands)	Local Tax Receipts (thousands)
Calcasieu	52,836	10,628	2,013	2,073	1,001
Caldwell	1,226	164	22	48	1
Cameron	3,368	1,050	117	132	10
Catahoula	1,524	259	45	60	27
Claiborne	1,064	178	30	42	2
Concordia	2,509	473	88	98	46
DeSoto	2,802	398	44	110	31
East Baton Rouge	104,016	22,317	4,114	4,082	2,872
East Carroll	463	82	14	18	9
East Feliciana	1,050	208	40	41	20
Evangeline	1,194	192	32	47	24
Franklin	1,040	175	30	41	20
Grant	1,357	254	47	53	2
Iberia	6,645	1,267	222	261	117
Iberville	1,731	292	48	68	39
Jackson	1,010	172	30	40	11
Jefferson	162,131	38,671	6,347	6,362	3,187
Jefferson Davis	2,109	324	51	83	24
Lafayette	77,352	20,139	2,887	3,035	2,270
Lafourche	13,342	2,841	493	524	259
LaSalle	571	77	10	22	1
Lincoln	7,816	1,606	306	307	101
Livingston	3,033	517	89	19	59
Madison	1,693	309	56	66	33
Morehouse	1,693	277	46	66	33
Natchitoches	5,223	1,038	201	205	98
Orleans	984,362	229,713	39,999	38,627	27,438
Ouachita	54,707	11,082	2,148	2,147	890
Plaquemines	9,942	2,859	359	390	26
Pointe Coupee	1,360	241	43	53	34
Rapides	31,604	6,449	1,247	1,240	515
Red River	555	91	15	22	11
Richland	1,675	296	53	56	28
Sabine	6,302	1,264	2[illegible]	247	65
St. Bernard	2,877	517	8[illegible]	113	82
St. Charles	2,203	451	82	86	23
St. Helena	611	97	16	24	1
St. James	11	1	0	0	0
St. John	1,103	233	47	43	11
St. Landry	9,073	1,726	324	356	196
St. Martin	1,051	177	30	41	22
St. Mary	26,857	6,738	1,014	1,054	539
St. Tammany	21,203	4,162	759	832	591
Tangipahoa	14,911	3,002	566	585	283
Tensas	614	125	24	24	12
Terrebonne	11,886	2,973	411	466	244
Union	876	126	19	34	1
Vermilion	12,644	3,604	428	496	330
Vernon	5,379	1,084	211	211	101
Washington	2,390	384	63	94	47
Webster	13,185	2,667	521	517	248
West Baton Rouge	5,571	1,199	233	219	132
West Carroll	332	36	3	13	4
West Feliciana	802	150	28	31	22
Winn	1,271	232	42	50	13

SOURCE: Louisiana Department of Culture, Recreation and Tourism, Office of Tourism.

According to the Louisiana Office of Tourism within the Department of Culture, Recreation and Tourism, a significant portion of the dramatic increase in Louisiana's tourism income can be attributed to the several national and international meetings of travel agents that have been held in Louisiana. In 1975 the Discover America Travel Organization held its first "Domestic Pow-Wow" (a sales marketplace where travel agents and tour wholesalers meet and book business with representatives of hotels, tourist attractions, the transportation industry and other travel services) in New Orleans. The American Society of Travel Agents held its "International Travel Congress" in Louisiana in 1976. DER, the largest travel agency chain in Germany, conducted its annual training academy and familiarization tours in Louisiana in 1977, and American Express travel agencies are scheduled to conduct a similar event here in 1979. Also set for 1979 in New Orleans is the annual "International Pow-Wow" of the Discover America Travel Organization. Each of these huge meetings brings hundreds of the world's top travel agents into Louisiana, where they spend one to two weeks getting acquainted with the hotels, restaurants and tourist attractions of the area.

INTERRELATIONSHIP OF CULTURE, RECREATION AND TOURISM

Louisiana's tourist attractions are predominantly historical, cultural or recreational in nature. Thus, the vitality of the tourist industry is directly dependent upon the preservation and development of the state's historical, cultural and recreational resources. The tourist industry, in turn, provides jobs and revenues which stimulate the economy and encourage further development of these resources.

The mutualism of the tourist industry and Louisiana's historic, cultural and recreational resources affords an excellent example of the interdependence of the various facets of the state's economy and heritage.

Chapter 10

Two primary elements in governmental units are structural and financial organization. In Louisiana the structure of the executive branch of state government has recently undergone rather drastic changes. Moreover, the financial bases—specifically, revenues—are experiencing noticeable change.

REORGANIZATION OF THE EXECUTIVE BRANCH

Article IV, Section 1 and Article XIV, Section 6 of the 1974 Louisiana Constitution provide that the functions, powers, duties and responsibilities of all departments, offices, agencies and other instrumentalities of the state be allocated within not more than 20 departments. (The offices of governor and lieutenant governor are excluded from the mandate.)

Act 720 (Reorganization Bill) of the 1975 Regular Session of the Louisiana Legislature assigned responsibility for implementation of the constitutional mandate to the Joint Legislative Committee on Reorganization of the Executive Branch. The Reorganization Committee, comprised of fifteen members (five each appointed by the governor, the President of the Senate and the Speaker of the House of Representatives) began its task in December 1975. Act 513 (1976 Regular Session) continued the reorganization process through the Joint Committee.

Phase I of the reorganization process was completed in July 1978. Approximately 300 state agencies, boards, commissions, committees and authorities were consolidated into 20 executive branch departments and the offices of the governor and lieutenant governor.

With the exception of five education boards, the Civil Service Commission and the Public Service Commission, all state entities relinquished all or some of their authority to the newly appointed or the elected officials of the 20 departments. Eighty-eight agencies were abolished or repealed by the reorganization process; another 27 agencies continue with only advisory functions.

Structural Reorganization

Figure 10-1 shows the 20 departments established by the reorganization process. Eleven departments are under the direct control of the governor (Figure 10-2). Nine departments are headed by elected officials (Figure 10-3). Each of the departments under the governor's control is administered by a secretary appointed by the governor with Senate approval. In general, the other appointed officers for these departments include an undersecretary (assigned responsibility for management and finance); a deputy secretary (an optional position appointed by the secretary with Senate consent and having no statutory duties); and assistant secretaries (assigned responsibility for functional offices of the departments).

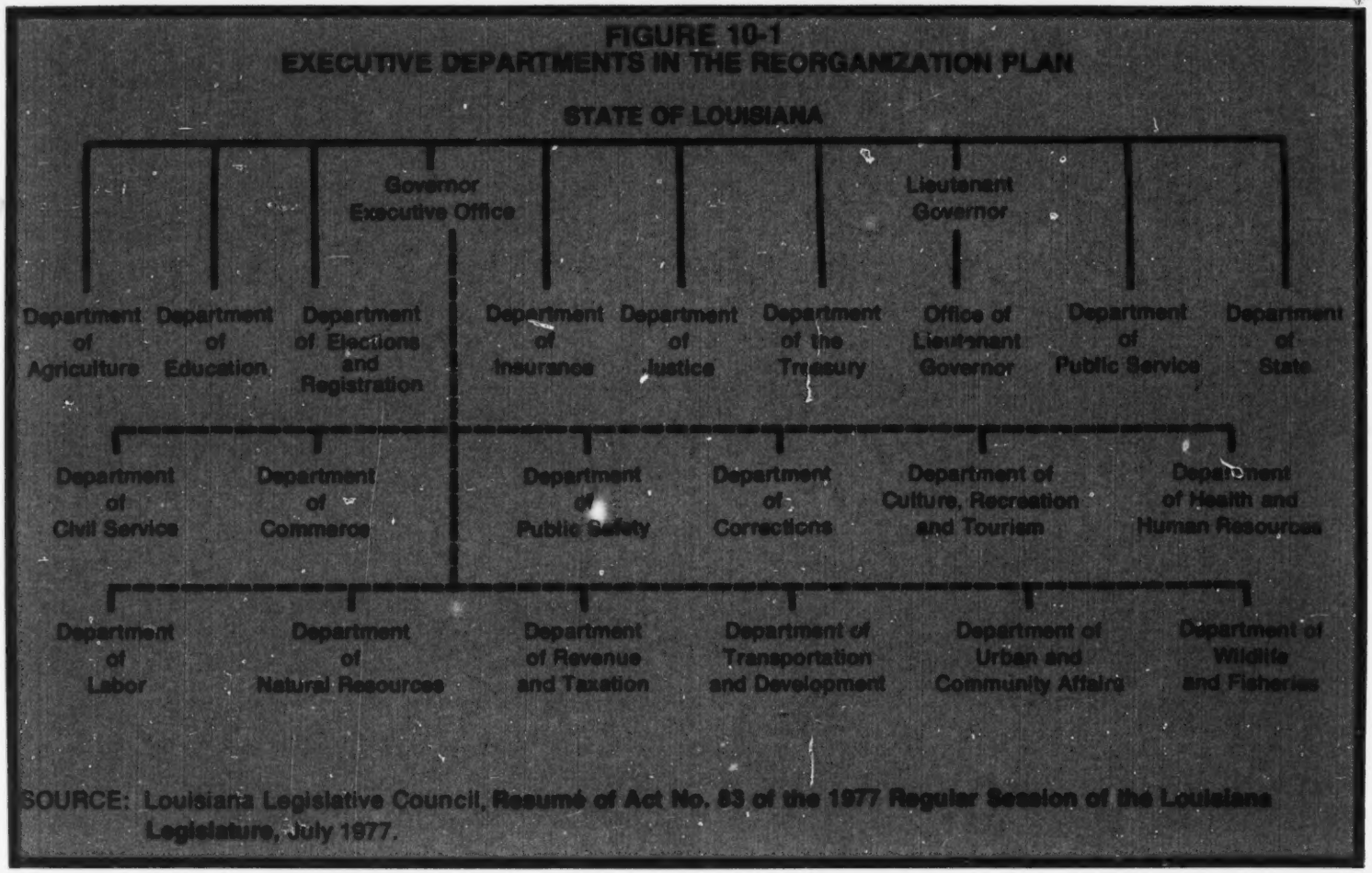
Reorganization Impact

The Reorganization Acts endeavored to create an executive branch structure that would be both responsive to the needs of Louisiana citizens and sufficiently flexible to meet changing human and natural conditions; to promote economy and efficiency in the operation and management of state government and to strengthen the executive capacity for effective, efficient and economic administration at all levels; and to improve for citizens of the state the quality of the functions performed and the programs and services rendered by state government. The reorganization process continues through the Joint Committee on Legislative Oversight, successor to the Joint Legislative Committee on Reorganization of the Executive Branch.

GOVERNMENT FINANCE

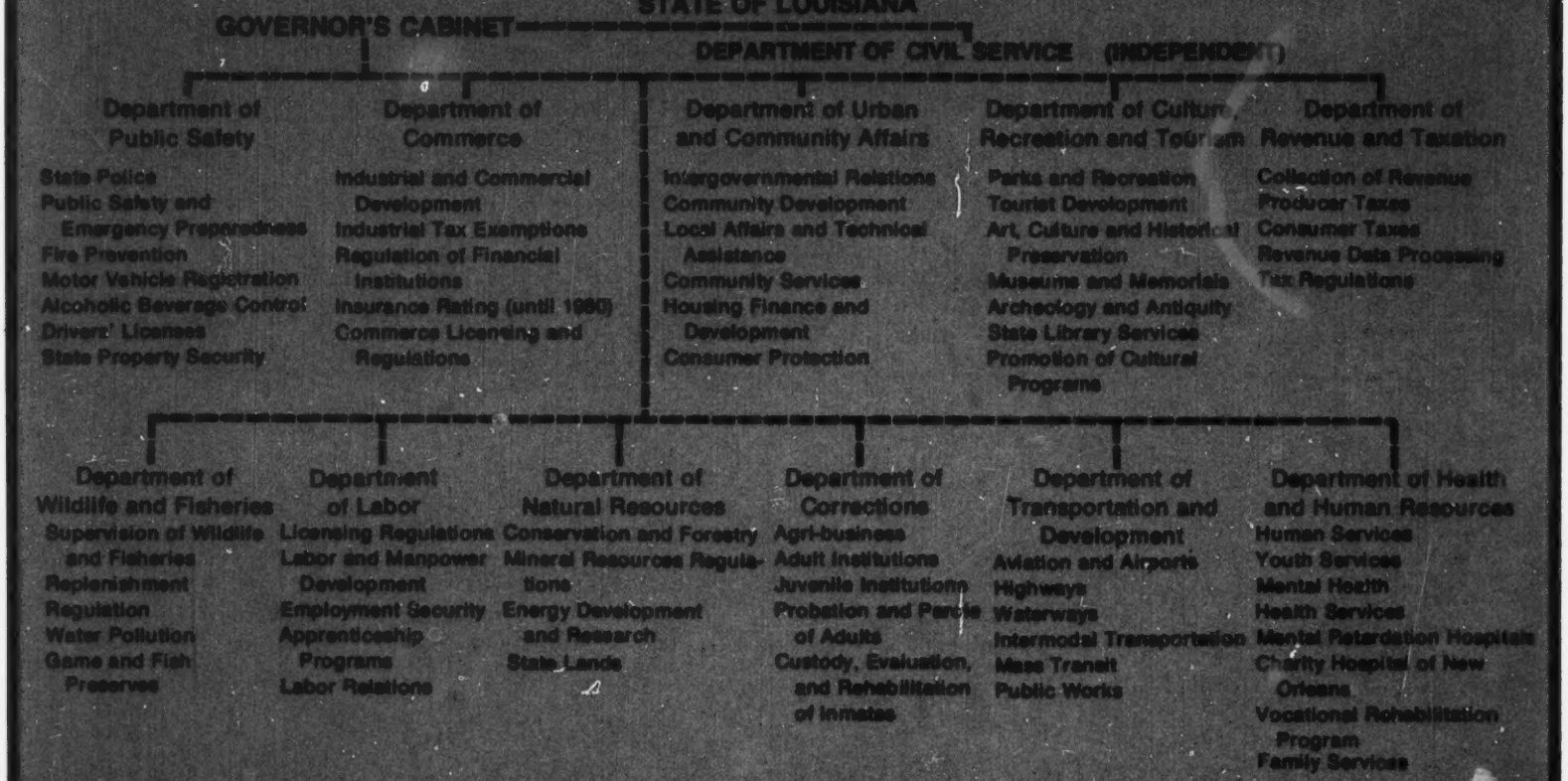
Article 7, Section 10 of the 1974 Louisiana Constitution requires that total appropriations by the legislature for any fiscal year shall not exceed anticipated revenues for that fiscal year. While this mandate does not preclude the possibility of a surplus, it does ensure that expenditures will not exceed revenues. Balancing the budget is the

FIGURE 10-1
EXECUTIVE DEPARTMENTS IN THE REORGANIZATION PLAN



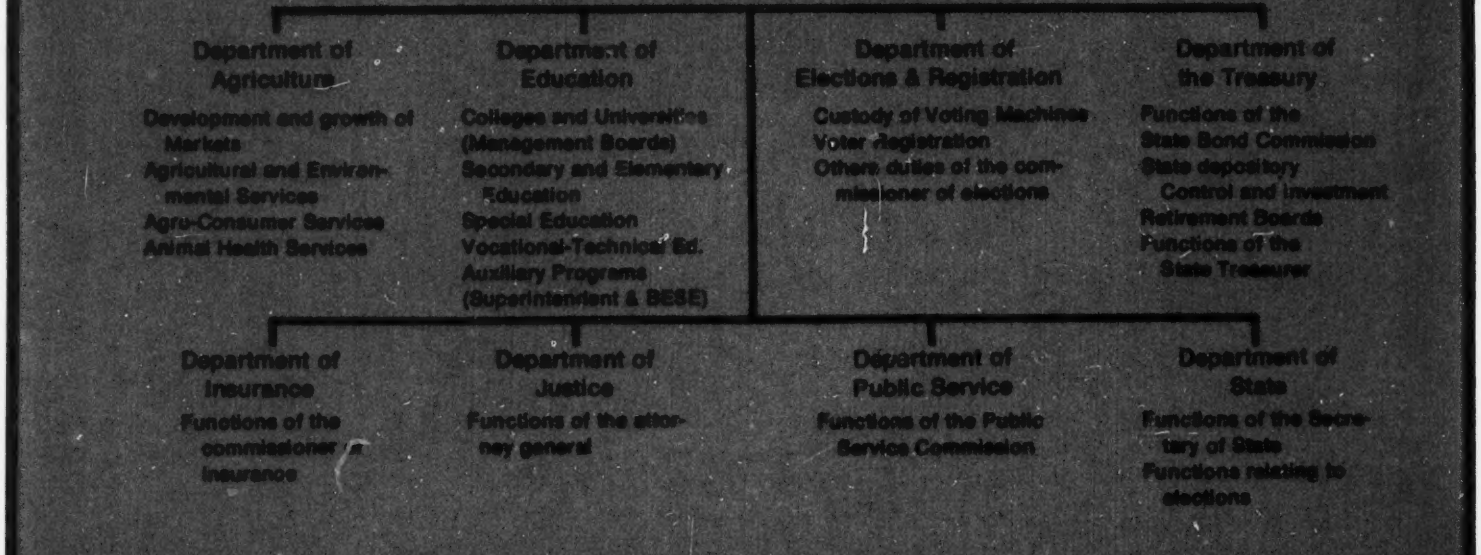
SOURCE: Louisiana Legislative Council, **Resumé of Act No. 83 of the 1977 Regular Session of the Louisiana Legislature**, July 1977.

FIGURE 10-2
EXECUTIVE DEPARTMENTS UNDER THE DIRECT CONTROL OF THE GOVERNOR; THE DEPARTMENT OF CIVIL SERVICE



SOURCE: Louisiana Legislative Council, Resumé of Act No. 83 of the 1977 Regular Session of the Louisiana Legislature, July 1977.

FIGURE 10-3
EXECUTIVE DEPARTMENTS UNDER STATEWIDE ELECTED OFFICIALS; THE DEPARTMENT OF PUBLIC SERVICE *



SOURCE: Louisiana Legislative Council, **Resume of Act No. 83 of the 1977 Regular Session of the Louisiana Legislature**, July 1977.

* The Public Service Commission, a five member board with members elected from single member districts, acts as creative head of this department.

function of the executive and legislative branches of government. Generation of revenues falls primarily under the Department of Revenue and Taxation. Preparation of the budget is the responsibility of the governor through the Division of Administration. As a check and balance, the legislature has final approval authority through its appropriation prerogative.

Revenues

In 1978 Louisiana's total state revenues equaled $3,931,930,249; this amount represents a 12.6 percent average annual increase since 1975 (Table 10-1). The most recent comparative data available—U.S. Bureau of the Census figures for 1977—indicate that Louisiana's total general revenue per capita ($820.24) significantly exceeded both average ($787.72) and median ($765.36) per capita amounts for all fifty states (Table 10-2).

Louisiana's total state revenues are derived from two principal sources—state-generated revenues and federal receipts.

State-Generated Revenues

The state generates revenues primarily through the levying of taxes and the sale of bonds (Table 10-1). In 1978 state-generated revenues equaled $2,877,564,951 and accounted for 73.2 percent of total state revenues. Between 1975 and 1978 state-generated revenues exhibited an average annual increase of 12.2 percent. However, the proportion of total state revenues represented by state-generated revenues has been declining since 1976.

As shown in Table 10-2, Louisiana's 1977 per capita collections from sales and gross receipts taxes ($217.17) were lower than both average ($242.82) and median ($238.50) figures for all fifty states; Louisiana's per capita individual income tax collection ($34.08) was dramatically below the average ($118.22) and median ($105.13) national figures. The state has been able to sustain a lower per capita collection of sales and income taxes through the receipt of sizeable severance tax revenues. (A major proportion of Louisiana's severance tax revenues are paid by persons living outside of Louisiana—i.e., the majority of consumers of Louisiana natural gas and petroleum reside in other states. As Louisiana reduces its reliance on the severance tax, it will be less able to "export" a part of its tax burden.)

However, between 1975 and 1978 sales tax collections increased by an average of 14.6 percent per year, while severance tax proceeds declined by an average of 5 percent per year. Declining oil and gas

TABLE 10-1
TOTAL STATE REVENUES BY SOURCE, LOUISIANA, FISCAL YEARS 1975-1978

Revenue Source	1975	Percentage of Total	1976	Percentage of Total	1977	Percentage of Total	1978	Percentage of Total	Average Annual Percent Change 1975-1978
Sales and Use Taxes	$ 365,090,479	13.5	$ 421,277,686	13.2	$ 481,676,511	14.6	$ 565,873,555	14.4	14.6
Severance Tax	548,211,092	20.3	552,972,758	17.3	492,861,856	15.0	473,191,768	12.0	- 5.0
Individual Income Tax	108,869,500	4.0	117,641,300	3.7	133,613,200	4.1	192,276,040	4.9	18.9
Corporate Income Tax	78,668,060	2.9	87,740,820	2.7	95,248,430	2.9	186,955,704	4.8	28.8
Mineral Resources	158,067,759	5.9	301,298,873	9.4	219,100,765	6.6	290,299,677	7.4	20.2
Highway Taxes (gasoline and special fuels)	153,169,640	5.7	164,932,779	5.2	173,138,628	5.3	183,633,929	4.7	
Tobacco and Beverage Taxes	100,366,191	3.7	106,524,247	3.3	108,241,388	3.3	113,835,039	2.9	
Corporate Franchise Tax	37,518,522	1.4	41,680,249	1.3	46,668,724	1.4	51,341,000	1.3	10.4
Interest on Investment and Excise License	84,302,718	3.1	81,356,917	2.5	82,350,988	2.5	101,153,875	2.6	6.0
Bond Sale Proceeds	50,000,000	1.9	248,331,670	7.8	214,245,000	6.5	257,740,000	6.6	54.6*
Various Other†	295,515,392	11.0	359,019,887	11.2	401,508,065	12.2	461,364,364	11.7	14.8
Total State Generated Revenues	**$1,979,779,353**	**73.5**	**$2,482,777,186**	**77.6**	**$2,448,653,555**	**74.3**	**$2,877,564,951**	**73.2**	**12.2**
Federal Grants	715,075,189	26.5	672,158,431	21.0	800,152,539	24.3	1,008,424,900	25.6	11.4
Revenue Sharing	N/A‡		45,847,706	1.4	46,918,077	1.4	45,940,398	1.2	
Total Federal Receipts	**$ 715,075,189**	**26.5**	**$ 718,006,137**	**22.4**	**$ 847,070,616**	**25.7**	**$1,054,365,298**	**26.8**	**12.9**
GRAND TOTAL	**$2,694,854,542**	**100.0**	**$3,200,783,323**	**100.0**	**$3,295,724,171**	**100.0**	**$3,931,930,249**	**100.0**	**12.6**

SOURCE: Louisiana State Planning Office based on data from Louisiana Division of Administration, State Accounting Office, **Financial Statements,** Fiscal Years 1975-1978.

* Bond sales variations are affected by the market interest rates on state government obligation bonds.
† Includes intergovernmental transfers from local governments.
‡ N/A indicates information not available.

TABLE 10-2
PER CAPITA AMOUNTS OF STATE GENERAL REVENUE SOURCES, 1977

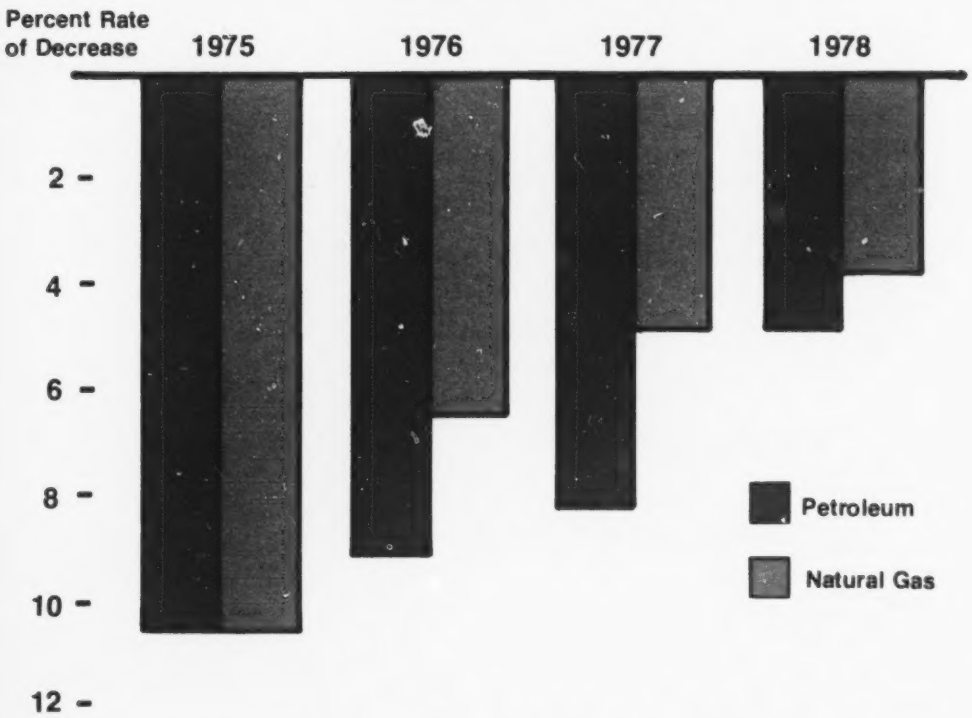
Source	Louisiana	50-State Average	Median State
Total General Revenue	$820.24	$787.72	$765.36
Intergovernmental Revenue from Federal Government			
Total*	246.55	213.03	224.27
Public Welfare	76.32	86.82	69.11
Education	51.02	41.90	45.82
Highways	50.39	29.51	37.08
General Revenue Sharing	11.97	10.51	10.00
Employment Security Admin.	6.30	8.50	8.51
Intergovernmental Revenue from Local Governments	3.52	12.69	5.93
Taxes			
All Taxes*	438.32	468.76	435.04
Sales and Gross Receipts Taxes			
Total*	217.17	242.82	238.50
General	122.85	143.27	140.46
Motor Fuels	44.16	42.15	46.93
Tobacco Products	14.53	16.23	15.11
Alcoholic Beverages	11.56	9.83	8.49
Individual Income	34.08	118.22	105.13
Corporation Net Income	24.29	42.54	33.62
Motor Vehicle Licenses	9.69	19.68	19.72
Death and Gift	5.10	8.37	5.84
Property	0.04	10.48	4.86
Total Charges and Miscellaneous General Revenue*	131.84	93.24	102.16
Current Charges			
Total*	59.03	59.21	64.90
State Institutions of Higher Learning	34.61	30.97	37.48
Hospitals	9.12	10.99	11.18
Toll Highways	0.30	4.71	7.18

SOURCE: U.S. Department of Commerce, Bureau of the Census, **State Government Finances in 1977,** GF77, No. 3, September 1978.

* Includes amounts for categories not shown separately.

production has been the key element in the decrease in severance tax collections; however, the rate of decline in production has lessened: the decrease of severance tax collections from Fiscal Year 1977 to Fiscal Year 1978 was not as drastic as from Fiscal Year 1976 to Fiscal Year 1977 (Figure 10-4). Another factor that reduced the severance collection differential from Fiscal Year 1977 to Fiscal Year 1978 was the increase in average revenue collected per barrel of petroleum. In Fiscal Year 1977 the state collected $.96 for each barrel of petroleum; that figure rose to $1.08 in Fiscal Year 1978. (According to the Louisiana Department of Revenue and Taxation, Severance Division, the severance tax levied on natural gas is $.07 per 1000 cubic feet and does not vary with market prices. The petroleum severance tax collection is 12.5 percent of the market value. The average market value

FIGURE 10-4
RATES OF DECREASE FOR NATURAL GAS AND PETROLEUM PRODUCTION IN LOUISIANA, 1975-1978



SOURCE: Louisiana State Planning Office based on data from the Department of Revenue. Severance Tax Division.

per barrel of petroleum increased during the period from 1975 to 1978 due to both a higher proportion of "new oil" [which commands a higher price than "old oil"] and increased prices for both old and new oil.)

"First-Use" Tax

In an effort to supplement revenues from severance taxes, the 1978 Louisiana Legislature passed the "first-use" tax. This tax, which was implemented April 1, 1979, is levied on offshore natural gas that is drawn from federal fields located beyond the state's three-mile limit, pumped ashore and passed through Louisiana to out-of-state users. (The tax is, in reality, levied on certain activities to which the gas is subjected within the jurisdictional boundaries of the State of Louisiana. The tax is measured by the volume of gas subjected to those activities.) The first-use levy, like the severance tax on natural gas, is $.07 per 1000 cubic feet. Louisiana consumers are not subject to any direct impact from the tax since credits are provided for in-state use of any gas subject to the tax.

In the first month of collections, revenues from the first-use tax totaled $25 million—a net gain of $22 million after deduction of $3 million in credits. Based on these figures, annual collections are expected to yield as much as $260 million—a considerable increase over the initial projection of $175 million.

Under provisions of a 1978 constitutional amendment, 75 percent of proceeds from the first-use tax must be applied toward retirement of the state's bonded indebtedness; the remaining 25 percent is dedicated for the protection and preservation of Louisiana's coastal area.

Because the first-use tax has been legally challenged by both the Federal Energy Regulatory Commission and several eastern states (on the grounds that the tax represents an unconstitutional infringement of interstate commerce), revenues from the levy will be placed in an escrow account until a final judicial opinion has been rendered.

Federal Receipts

Louisiana state government receives federal funds through both federal grants and revenue sharing. In 1978 federal aid to Louisiana state government totaled $1,054,365,298 and represented 26.8 percent of total state revenues (Table 10-1). Between 1975 and 1978 Louisiana's federal receipts averaged a 12.9 percent increase per year—as compared with an average overall increase in revenues of 12.6 percent annually. The state evinced an increased reliance on

federal aid as the proportion of total state revenues comprised of federal receipts exhibited slow but steady growth from 1976 to 1978. As shown in Table 10-2, Louisiana's per capita general revenue receipts from the federal government equaled $246.55 in 1977—a figure higher than both the average ($213.03) and median ($224.27) figures for all fifty states.

The proportion of federal intergovernmental transfers used to finance capital expenditures increased between 1975 and 1978. Nonetheless, that proportion did not exceed 20 percent for any year; at least 80 percent of all federal receipts have been applied toward annual operating costs of programs administered by the state.

Expenditures

During the period 1975 to 1978 Louisiana's total state government expenditures grew at an average rate of 9.1 percent per year (Table 10-3). In 1977 expenditures totaled $3,174,277,340; the budgeted amount for 1978 was $3,464,867,961.

Louisiana's general expenditures may be divided into two broad categories—direct expenditures (payments to employees, suppliers, contractors, beneficiaries and other recipients of government payments) and intergovernmental expenditures (amounts paid to other governments as fiscal aid). Direct expenditures may be further classified as either operating costs or capital outlay.

Figures for 1977 (based on U.S. Bureau of the Census tabulations) indicate that direct expenditures accounted for approximately 70 percent of Louisiana's total general expenditure. (Operating costs represented slightly less than three-fourths of direct expenditures; capital outlay expenditures constituted almost 26 percent.) Intergovernmental expenditures made up approximately 30 percent of the state's total general expenditures during that year.

Table 10-3 shows Louisiana's major expenditures by function from 1975 to 1978. (Figures for 1978 are budget estimates and may be subject to modification.) Education, human services and transportation were consistently the top three spending functions during that period.

Reorganization of the executive branch of Louisiana's state government resulted in changes in both department/function classifications and budget allocations. These changes are reflected in Table 10-3. Transportation and capital outlays displayed the most dramatic

TABLE 10-3
EXPENDITURES BY DEPARTMENT/FUNCTION, LOUISIANA, FISCAL YEARS 1975-1978

Department/Function	1975	1976
Executive, Judicial, Legislative and Elected Officials	$ 82,608,508	$ 90,671,008
Conservation and Development Parks, Recreation and Culture	50,152,723	62,783,667
Transportation and Public Works	451,602,791	536,648,607
Public Safety and Defense	56,418,889	63,710,363
Health and Human Resources	632,938,230	729,619,699
Corrections	25,652,848	33,241,327
Revenue and Taxation	11,501,191	12,275,792
Education	919,539,549	1,044,036,921
Debt Service	74,689,525	68,777,810
Capital Outlay	113,307,244	110,170,275
Regulatory and Licensing, Labor and Banking‡	5,520,075	6,380,301
Retirement System‡	8,438,709	11,896,502
Other	345,535,211	437,220,468
Total	**$2,777,950,493**	**$3,207,432,940**

Department/Function	1977	1978*
Executive, Judiciary, Legislative and Elected Officials	$ 99,802,680	$ 93,129,542
Commerce, Culture, Recreation and Tourism	20,826,215	24,022,029
Transportation and Development	511,370,176	195,754,767†
Public Safety	64,564,205	96,214,830
Health and Human Resources	761,774,512	889,538,386
Corrections	48,124,657	53,422,697
Revenue and Taxation	16,256,478	17,749,386
Education	1,108,732,053	1,183,974,041
Debt Service	91,627,924	112,401,884
Capital Outlay	146,477,825	340,375,853
Natural Resources, Wildlife and Fisheries‡	33,250,238	35,204,132
Urban and Community Affairs‡	2,639,505	2,450,249
Other	268,830,872	420,630,165
Total	**$3,174,277,340**	**$3,464,867,961**

SOURCE: Louisiana State Planning Office based on data from Louisiana Division of Administration, State Accounting Office.

* 1978 figures are based on Executive Budget.

† Transportation's Capital Outlay budget was transferred to capital outlay group.

‡ Several budget line departments changed in FY 1977 due to governmental reorganization.

changes in expenditures as a result of the transfer of the Department of Transportation and Development's capital expenditures to the capital outlay category.

Table 10-4 depicts Louisiana's per capita figures for state general expenditures in 1977. Per capita general expenditures for all functions equaled $836.08—an amount considerably larger than the average ($769.77) and median ($758.81) figures for all fifty states. Louisiana's per capita expenditures were significantly higher than the average and median national figures for several functions—capital outlay, highways, hospitals and corrections. Per capita expenditures for health, financial administration and employment security administration were slightly lower in Louisiana.

Figures from the U.S. Bureau of the Census indicate that Louisiana's total intergovernmental expenditure (amounts paid to other governments as fiscal aid) in 1977 was $984,120,000. Figure 10-5 shows the state's intergovernmental expenditure both by type of receiving government and function. The overwhelming majority of the state's intergovernmental transfers are to local governmental units —e.g. parishes, school districts and municipalities. These state expenditures enable local governments to rely less heavily on property and sales tax receipts for funding of local programs and services.

Capital Outlay Budget and State Bond Sales

While the state's Capital Outlay Budget (a separate budget prepared by the Division of Administration) has not always included the total dollar amount appropriated for the construction of government buildings and other fixed assets, there have been attempts to consolidate a greater proportion of all capital expenditures into this category.

Table 10-5 shows the amount appropriated to capital outlay from Fiscal Year 1975 to Fiscal Year 1978. (The dramatic increase in 1978 resulted from the addition of the Department of Transportation and Development's capital outlay budget.) Total outstanding state debt is shown only through Fiscal Year 1977. Bond sale proceeds and federal revenue allocated to capital outlay are provided since these constitute major sources of financing capital expenditures. The amount of bond sales is determined largely by interest rate fluctuations. Not all bond sale proceeds must be expended during the year in which they accrue.

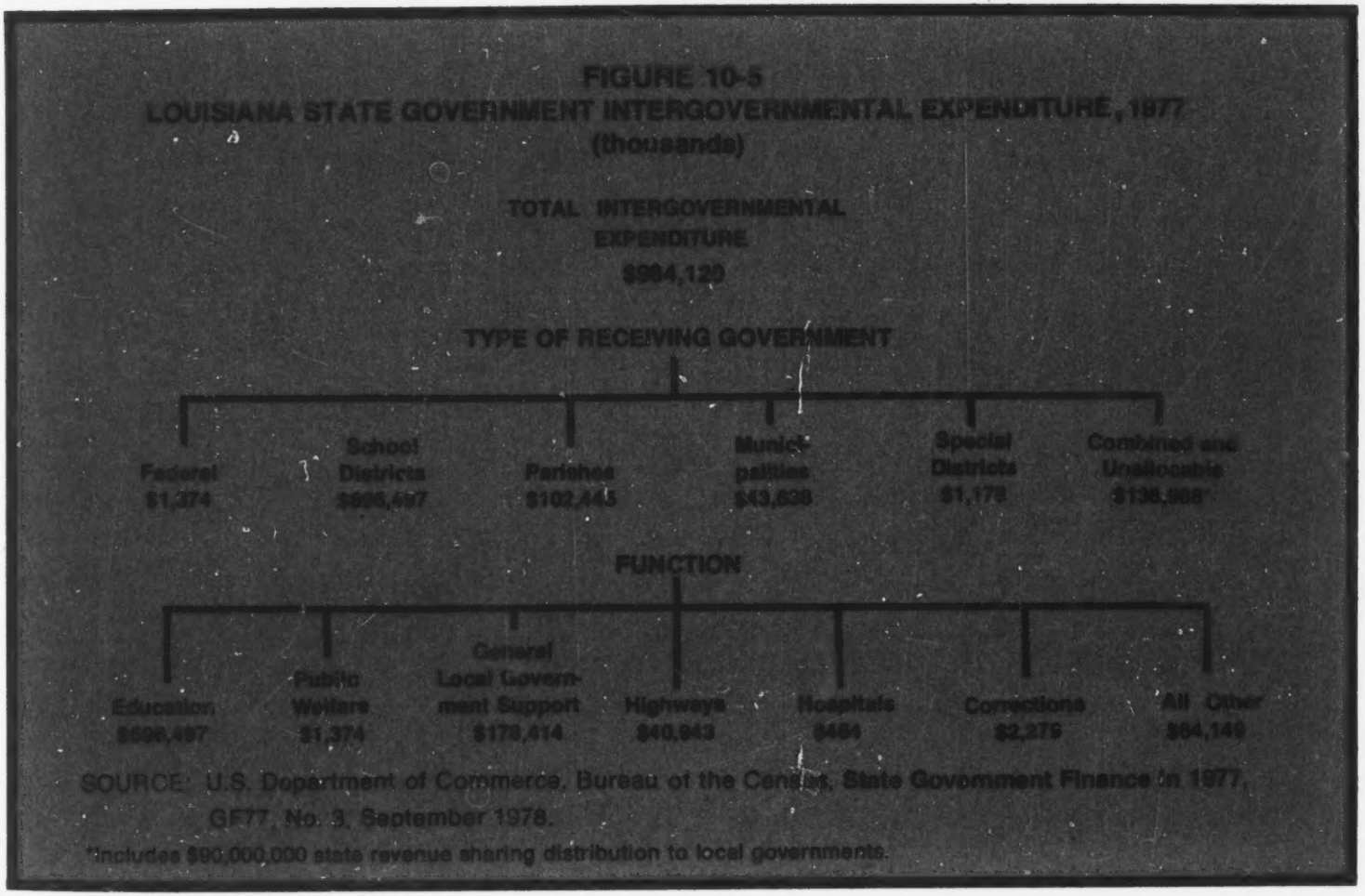
TABLE 10-4
PER CAPITA AMOUNTS OF STATE GENERAL EXPENDITURES, 1977

Category	Louisiana	50-State Average	Median State
General Expenditure for All Functions*			
Total	$836.08	$769.77	$758.81
Intergovernmental Expenditure	250.99	289.69	237.22
Direct Expenditure Total	585.09	480.08	513.75
Other than Capital Outlay	428.83	402.23	438.57
Capital Outlay	156.26	77.85	87.45
Education	305.93	296.96	307.09
Public Welfare	111.85	152.01	111.04
Highways	135.37	81.14	101.37
Hospitals	63.73	40.54	39.47
Natural Resources	26.32	20.26	23.33
Interest	18.83	23.82	14.50
Health	15.33	17.92	17.94
Corrections	30.01	13.37	12.26
Financial Administration†	8.97	10.39	10.65
Employment Security Administration	6.92	7.88	7.95
General Control‡	9.36	8.62	9.09
Total Personal Services§ Expenditures	184.97	165.92	177.92

SOURCE: U.S. Department of Commerce, Bureau of the Census, **State Government Finances in 1977**, GF77, No. 3, September 1978.

* Includes amounts for categories not shown separately.
† Activities involving finance and taxation.
‡ The legislative and judicial branches of government, the office of the chief executive, and auxiliary agencies and staff services responsible for law, recording, general public reporting, personnel administration and the like.
§ Amounts paid for compensation of state officers and employees.

FIGURE 10-5
LOUISIANA STATE GOVERNMENT INTERGOVERNMENTAL EXPENDITURE, 1977
(thousands)



SOURCE: U.S. Department of Commerce, Bureau of the Census, State Government Finance in 1977, GF77, No. 3, September 1978.

*Includes $90,000,000 state revenue sharing distribution to local governments.

TABLE 10-5
LOUISIANA TOTAL BOND SALES PROCEEDS, CAPITAL OUTLAYS, TOTAL DEBT SERVICE COSTS AND TOTAL OUTSTANDING DEBT AS OF END OF FISCAL YEARS 1975-1978

Category	1975	1976	1977	1978
Capital Outlays	$113,307,244*	$ 110,170,275*	$ 146,477,825*	$340,375,853
Debt Service Costs (principle and interest)	74,689,525	68,777,810	91,627,924	112,401,884
Outstanding Debt	834,839,833	1,034,019,330	1,326,177,833	N/A†
Bond Sale Proceeds	50,000,000	248,090,000	348,245,000‡	257,640,000
Capital Outlays from Federal Receipts	0	1,675,534	4,469,431	180,380,000

SOURCE: Louisiana State Planning Office based on data from Division of Administration, State Accounting Office.

* Does not represent total capital outlay for state; Department of Transportation and Development budget included capital outlay category.
† N/A indicates information not available.
‡ Includes Louisiana Stadium and Exposition District Refunding Bonds.

State Government Financial Trends

Although state government expenditures and revenues increase annually in Louisiana, the growth rates are modest when compared with the state economy as a whole. State government revenues accounted for 12.6 percent of Louisiana Gross State Product in 1973; the proportion had declined to eleven percent by 1977. Similarly, state government operating expenditures decreased from 0.18 percent of Gross State Product in 1975 to 0.17 percent in 1977.

While the rate of growth of Louisiana's state government expenditures is slower than the growth rate for the private sector, Louisiana's state government continues to be a highly centralized form of government on which local governments rely heavily to receive a major share of revenues. As the cost of government services has risen, Louisiana has become somewhat more dependent on the federal government to finance a higher proportion of its operations.

Moreover, the state has gradually become increasingly reliant on sales and income taxes rather than severance taxes as sources of state revenues. Higher consumer prices as well as greater consumer demand have resulted in increased sales tax collections. Although a decline in natural gas and petroleum production has been the principal factor underlying decreased severance tax collections, the production decline has lessened; thus, Louisiana should not experience any further drastic decreases in severance tax collections.

CONCLUSION

The recent changes in both governmental structure and financial base have had and will continue to have major import for citizens of Louisiana. State government as a result of reorganization proffers increased administrative efficiency and heightened responsiveness to citizen needs. Alterations that will lead to the diversification of the state's financial base should enable Louisiana to enjoy long-term stability in revenue sources. These changes will be felt at every level of society because state government in Louisiana provides, to an extraordinary degree, public goods and services for its citizens.

Appendix

LOUISIANA LEGISLATURE

MAJOR ACTS: REGULAR SESSION, 1978

Act 627: To revise the law relative to matrimonial regimes to provide for equal management of community property.

Act 294: To create a first use tax to be levied on natural gas produced outside of the territorial limits of the state of Louisiana and not subject to other taxes.

Act 293: To create and provide for the First Use Tax Trust Fund in the state treasury as a special and irrevocable trust fund for the proceeds to be derived from a first use tax and any new or alternate tax on the same resources to be used for redemption of state debt and for capital improvements.

Act 797: To propose an amendment to Article IX of the Constitution of Louisiana to provide for the creation of the First Use Tax Trust Fund in the state treasury as a special and irrevocable trust fund for the proceeds to be derived from a first use tax.

Act 436: To provide a severance tax credit to persons liable for the payment of the first use tax and for parish allocations.

Act 334: To provide for the development, implementation and enforcement by the Louisiana Department of Natural Resources of a comprehensive state hazardous waste control program.

Act 327: To prohibit the transportation of high level radioactive wastes into the state for disposal or storage in this state or elsewhere.

Act 361: To provide coastal zone management boundaries; to provide for the Coastal Management Section, for the Louisiana Coastal Commission, and for management programs and permits and procedures at state and local levels.

Act 725: To provide for the prescription of marijuana for use as a therapeutic drug, for the creation of the Marijuana Prescription Review Board, and for the requirement of the board to certify patients, practitioners and pharmacies.

MAJOR ACTS: REGULAR SESSION, 1977

Act 83: To continue the reorganization of the executive branch of state government.

Act 756: To establish certain requirements for the certification of teachers by the State Board of Elementary and Secondary Education.

Act 757: To provide, for certification purposes, for the approval of teacher education programs by the State Board of Elementary and Secondary Education.

Act 645: To provide with respect to the certification of teachers by the State Board of Elementary and Secondary Education that requirements and qualifications for certification prescribed by the board shall assure current ability and proficiency of teachers.

Act 646: To require the Department of Education to establish a program of technical assistance to the parish and municipal school systems concerning methods for the selection of teachers.

Act 155: To provide for compulsory motor vehicle liability security or insurance.

Act 467: To provide for the manufacture, sale, distribution, possession, use and consumption of saccharin substances and foods and drinks containing such substances.

Act 99: To provide for the manufacture, sale, possession and use of laetrile or amygdalin.

Act 705: To provide a state and local coastal zone management act for Louisiana in accordance with federal requirements. (The federal government later ruled Act 705 insufficient with regard to boundaries and division of authority.)

Act 561: To provide for regulatory jurisdiction over coal or lignite slurry pipelines by the assistant secretary of conservation in Louisiana, including expropriation authority.

Act 193: To prohibit the disposal of radioactive material or waste in salt domes; to provide for notices, for disposition of study results and for penalties for violations.

Act 650: To regulate the pricing of new intrastate natural gas and any title or interest therein sold or transferred by the producer thereof pursuant to contracts entered into subsequent to the effective date of this Act.

MAJOR ACTS: SPECIAL SESSION, 1977

Act 1: To reconstruct Louisiana income tax tables to compensate for changes in federal tax laws.

Act 9: To provide for programs for evaluation of teachers and principals in the parish and city school systems of the state.

Act 10: To require the Louisiana Department of Education to establish a new program for in-service teacher training.

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Louisiana Department of Health and Human Resources, **Annual Report 1977-1978; Health Data Book 1978; Budget Estimates and Requests for Fiscal Year 1978-1979; Vital Statistics** 1974, 1975.

U.S. Department of Commerce, Bureau of the Census, **Statistical Abstract of the United States 1978.**

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Board of Regents, **Factbook on Public Higher Education in Louisiana 1976-1977** and **The Master Plan for Higher Education in Louisiana.**

Louisiana Department of Education, **One Hundred Twenty-Eighth Annual Report for the Session 1976-1977.**

Louisiana State Board of Elementary and Secondary Education, **1977 Louisiana State Plan for the Administration of Vocational Education.**

National Education Association, **Estimates of School Statistics 1978-1979** and **Rankings of the States, 1978.**

Public Affairs Research Council of Louisiana, Inc., **Free College Tuition for Teachers,** PAR Analysis No. 232, November 1978.

Public Affairs Research Council of Louisiana, Inc., **Impact of Declining School Enrollments: Past, Present and Future,** PAR Analysis No. 233, December, 1978.

Public Affairs Research Council of Louisiana, Inc., **The Impact of Illiteracy in Louisiana,** PAR Analysis No. 228, February 1978.

U.S. Department of Commerce, Bureau of the Census, Assorted population studies and publications.

U.S. Department of Health, Education and Welfare, National Center for Education Statistics, **Digest of Education Statistics 1977-1978** and **The Condition of Education**, 1978 Edition.

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Louisiana Commission on Law Enforcement, Louisiana Criminal Justice Information System Division, **Crime in Louisiana, 1976** and **Crime in Louisiana, 1977.**

U.S. Department of Justice, Law Enforcement Assistance Administration, National Criminal Justice Information and Statistics Service, **Sourcebook of Criminal Justice Statistics, 1977** and **Expenditure and Employment Data for the Criminal Justice System 1976.**

U.S. Department of Justice, Federal Bureau of Investigation, **Crime in the United States 1977: Uniform Crime Reports for the United States.**

Louisiana Department of Corrections, **Annual Report 1975-1976; 1976-1977.**

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Louisiana State Parks and Recreation Commission, **Louisiana State Parks Plan** and **Outdoor Recreation in Louisiana 1975-1980.**

Louisiana Department of Wildlife and Fisheries, **A Guide to Wildlife Management Areas** and **Special Report to the Governor,** July 1978.

Louisiana Wildlife and Fisheries Commission, **Louisiana's Natural and Scenic Streams System.**

Frank Davis, "So You Need a Place to Launch?" **Louisiana Conservationist,** Vol. 29, Nos. 3 and 4 (March-April 1977).

E. C. Nebel, III and E. John Bullard, "The Economic Impact of King Tut," **Louisiana Business Survey,** Vol. 9, No. 4 (October 1978).

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